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ABSTRACT

One of 11 guides intended for use at the junior high school level of career exploration, the primary focus of the teacher's guide is on activities exploring the cluster area of agribusiness. The document is organized into five units: (1) occupations in agribusiness, (2) definition of the agribusiness cluster, (3) an overview of the cluster and an in-depth view of horticulture and forestry, (4) educational opportunities in agribusiness, and (5) self-evaluation in relation to a career in agribusiness. Each unit specifies a unit purpose and objectives and includes an outline of unit content, teaching-learning activities, evaluation techniques, and suggested resources. Related instructional materials accompany each unit and include reference lists, charts, transparency masters and sample forms. The appendix contains occupational briefs, job titles, a content outline of job families, and a list of publishers addresses. (HW)

ED 098419

# EXPLORING CAREERS IN AGRIBUSINESS; A GUIDE FOR TEACHERS

Prepared by

Bruce Carpenter

Curriculum Specialist

July 1974

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## PREFACE

Career education may be described as a program of systematic educational experiences which prepares students for economic independence and personal fulfillment. Such a program should focus on the development of knowledge, general and specific abilities, and the awareness of the values of a work-oriented society; assisting all individuals--at all educational levels and ages--to interact with the economic sector.

Career education includes vocational training, but it is more than this. It aims toward developing the total individual; i.e. an individual able to perform all of his life roles with the skill, knowledge, and understanding necessary for success in all of these roles. It aims at developing the self-motivating and self-fulfilled individual who is a constructive force in the maintenance and improvement of the social body of which he is a part.

To meet the needs of individuals of all educational levels and ages, five phases of career education need to be implemented: awareness, orientation, exploration, preparation, and adult and continuing education.

Career awareness, emphasized early in the career development program, is to lead the individual in developing certain fundamental attitudes toward himself, toward other people, and toward work. Career orientation and exploration--emphasized in the middle school years--provides appropriate educational experiences which enable the individual to become familiar with the economic system and which allow the individual to explore various occupational clusters, to obtain initial work experience, and to integrate work values into his personal value system. The career exploration phase

places equal emphasis on exploration of specific occupational clusters and on the relevancy of academic subject matter to career goals. During the preparation phase, which may begin at grade ten or later, the individual narrows his choices of careers and prepares to enter the labor market or to continue his education. The purposes of adult and continuing education are to assist in the individual's advancement and to aid adults in discovering, analyzing, and preparing for new careers.

Accepting the philosophy underlying career education probably means change for the educator and the educational system; it certainly means additional planning and organizing. Adopting this new concept could mean adding totally new programs, changing present programs, training new personnel, and/or developing new courses of study.

To say that education must change is one thing; implementing that change is something else. This guide, "Exploring Careers in Agribusiness" is one of eleven such guides (including "Orientation to the World of Work," an introduction to all the guides) which can be used as a resource for teachers in implementing the exploration phase of career education in the middle/junior high school.

The following are suggestions for implementing this guide:

(1) It can be used as one of the eleven guides as resource material for a series of mini-courses or activity courses, each dealing with a separate occupational area or cluster.

(2) It can be used as a resource to integrate career exploration activities into the existing curriculum.

In either option, this career exploration cluster guide can provide a valuable resource for student exploration of the Agribusiness cluster.

# INTRODUCTION

## Purpose of the Guide

This teacher guide is designed primarily for use at the middle school or seventh, eighth, and ninth grade levels. However, it may serve as a useful aid in other educational settings such as high schools, vocational schools, or public placement and counseling agencies.

The guide suggests a wide range of experiences which are designed to take the student from wherever he is and move him progressively toward the goal of vocational maturity and a career choice.

The guide can serve as a nucleus for group instruction relating to the cluster area of agribusiness. It is designed primarily for career exploration on the part of the student under the supervision of the teacher. Although the material is primarily geared to group instruction, it is hoped that through the proper counseling and teacher guidance the students will personalize all of the learnings, thus resulting in a better self-understanding in relation to the world of work.

## Suggestions for Using the Guide

The utilization of this guide will be greatly enhanced if the team approach in teaching is practiced whenever possible. Counselors, vocational teachers, general education teachers, and work experience coordinators should all be involved if the guide is going to benefit all students to the utmost.

The guide may serve as the curriculum base on which to implement a totally new program in career education or it may give insights into the

strategy to follow when implementing career education concepts relating to agribusiness into an ongoing program.

The units in the guide deal with activities in which the teacher must involve the student in exploring the cluster area of agribusiness. In many situations it is suggested that a student or a group of students experience a certain activity or view a certain work role. Each time students view or experience a certain activity or work role, they should be encouraged to share with other students:

(1) Their observation of job conditions and performance.

(2) Their own feelings while observing or performing the activity or work.

(3) The personal attitudes or needs which they feel would be limited by such work.

(4) The aptitude and abilities which they feel they have or may not have for such work.

Group involvement and interaction will result in a better understanding of the cluster area of agribusiness.

The Appendix of the guide contains occupational briefs, job titles, and a content outline of the job families. These materials are designed to give the teacher a better base from which to aid the student in exploring agribusiness. The occupational briefs describe job characteristics, qualifications, employment prospects, and advancement opportunities for numerous jobs in the cluster area. They may be used as student reference material. The content outline furnishes specific information concerning all job families in the cluster area. This material will become very valuable as the student, under teacher supervision, begins to explore the area of agribusiness.

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UNIT ONE

INTRODUCTION TO THE EXPLORATION

OF

OCCUPATIONS IN AGRIBUSINESS

UNIT PURPOSE: To provide an occupational background study before focusing on the agribuisness cluster.

PERFORMANCE OBJECTIVES: The student will be able to

I. Distinguish between occupation, job and career.

II. Explain the reasons why people work.

III. Identify information that should be obtained when considering various occupations.

IV. List various occupations that are found in the community and state.

V. Construct an agribusiness exploratory resource file.

I. The student will be able to distinguish between occupation, job, and career.

A. Suggested Content

1. Definition of the term occupation

a. Principal employment role of one's life

b. Principal business or vocation of one's life

c. Activity in which an adult spends the most of his working time

2. Relation of the term occupation to jobs

a. Occupations are made up of specific jobs.

b. What a person does specifically within an occupation is his job.

c. Examples of jobs within occupations

| Occupation | Jobs |
|---|---|
| Tobacco Farmer | Transplanting<br>Spraying<br>Cultivating<br>Harvesting |
| Plumber | Install waterlines<br>Unclog drain<br>Hook-up water heater<br>Install bath fixtures |
| Teacher | Lesson planning<br>Lesson preparation<br>Lesson presentation<br>Student evaluation |

3. Relation of the terms occupation and jobs to careers

a. A career is the sum total of the work (occupations and jobs) done by a person in his employment lifetime.

b. Career refers to a meaningful progression in a person's working life.

c. Examples of progression within a career

| Career | Occupations |
|---|---|
| Politics | Lawyer<br>County Judge<br>State Representative<br>Governor<br>U. S. Senator |

d. A career differs from an occupation in that the occupation at that time is a part of a career.

e. One's career begins in the very early years and continues beyond the time one retires from a position of paid employment.

B. Suggested Teaching-Learning Activities

1. Involve the student in obtaining two definitions of the terms occupation and career from two possible sources.

2. Play the game "Pop-up." Instruct the student that the teacher is going to call the names of class members at random. When a name is called the student is to pop-up within ten seconds and give the name of an occupation. You may want to divide into teams and award a prize to the team who gives the most occupational names while playing the game "Pop-up." If jobs are given rather than occupations, take time to discuss the differences.

3. Show the transparencies, AGR-1, "The Definition of Occupation and The Definition of Career," page 18, and conduct a student discussion of the definition of the term occupation and the relation of an occupation to a career.

4. Divide the students into teams of two. Assign one occupation to two or more teams. Involve each team in identifying all the possible jobs within that occupation. Compare the results obtained by the teams.

5. Involve each student in describing or role-playing the occupation of his or her parents. Have the student bring to class items used by their parents in their occupation.

6. Form an occupational tree or occupational display. Items to be included on the tree or in the display should be items used in the occupations of the students' parents.

7. Form a career tree display. Choose a career area and list and illustrate occupations in that area.

8. Develop a bulletin board that depicts the various occupations in the community.

9. Play the game, "What's My Occupation." Base the game on the concept of the television game, "What's My Line." Information to be used for the game can be found in the occupational briefs on page 144.

C. Suggested Evaluation

1. Prepare a list of occupations on one side of the chalkboard or paper; on the opposite side list at least three jobs done in each occupation. Have the students match the jobs to the occupations.

2. Have each student tell the class orally or put in writing his definition of the terms occupation and career.

3. Choose an occupation that might be considered the climax of a particular career area. Ask each student to list in a logical sequence the various occupations or jobs one might have in working their way to the stated occupation. Point out that the total of these occupations is the career of that individual.

4. Prepare a list of career areas. List numerous occupations. Have the students separate the occupations into the proper career areas and then list the occupations in a logical progression sequence.

D. Suggested Resources

1. Books

   a. Career Education in the Middle/Junior High School, p. 22 and 28.

   b. Career Education: Who Needs It, Who Provides It, Who Can Improve It, p. 7.

   c. Dictionary

   d. Encyclopedia

2. Transparency Master AGR-1, p. 18.

II. The student will be able to explain the reasons why people work.

A. Suggested Content

1. Basic reasons people work

a. Provide for the necessities of life for oneself and family

(1) Food
(2) Clothing
(3) Shelter

b. Express creativity

(1) Artistry
(2) Designing
(3) Writing

c. Provide for the luxuries of life

(1) Color television sets
(2) Boats
(3) Campers

2. Other reasons people work

a. Provide security

(1) Regular income
(2) Insurance
(3) Retirement benefits
(4) Vacations

b. Provide the opportunity to associate with others of similar interests

c. Receive experiences that will permit advancement

(1) Recognition for achievements
(2) Job-occupational promotions

d. Satisfaction of being able to work and be a contributing member of the community

B. Suggested Teaching-Learning Activities

1. Invite the principal, another teacher, or guidance counselor to the class to discuss why they work in their particular occupation. Allow ample time for student discussion and questions.

2. Select a student who has been involved in work experience activities and have him or her share with the class their work experiences on a particular job within an occupation.

3. Involve the student in discussing with his or her parents at home why they work in their particular occupation. Instruct the students to bring back to class five reasons why their parents work. Discuss these reasons in the classroom setting.

4. Show and discuss the transparency AGR-2, "Reasons for Working In An Occupation," page 19. Involve the student in adding additional reasons to the list.

5. Involve the student in making a list of the goods the student's family uses. Divide this list into necessities and luxuries. Put a list on the board. Relate these goods to why people work in an occupation.

6. Hold a speaking contest with the topic being "Why Work." Select the top five speakers and speeches in the class. Hold a final contest with outside judges and give a prize to the winner.

C. Suggested Evaluation

The student will list and discuss in writing four reasons why he will work in an occupation. Evaluate these reasons in relation to how well the student explains the concept of why people work.

D. Suggested Resources

1. Resource persons

   a. Principal
   b. Teachers
   c. Guidance counselors

2. Books

   a. I Find My Vocation, Ch. 4.

   b. Occupational Information, Ch. 1.

   c. Occupations and Careers, Ch. 6.

3. Transparency Master AGR-2, p. 19.

III. The student will be able to identify information that should be obtained when considering various occupations.

A. Suggested Content

1. Information to secure

a. Employment outlook

(1) Present
(2) Future

b. Nature of the occupation

(1) Duties performed
(2) Advantages
(3) Disadvantages
(4) Working conditions

--Salary
--Hours
--Fringe benefits

c. Personal qualities required

(1) Interests
(2) Physical abilities
(3) Mental abilities

d. Qualifications for employment

(1) Formal education
(2) On-the-job training
(3) Previous work experience

B. Suggested Teaching-Learning Activities

1. Involve the students in making a list of the information they would like to secure concerning any occupation of their interest. Compile a final list on the chalkboard and discuss.

2. Simulate an employer-employee setting. Involve the teacher, guidance counselor, or student in being the employer with a student serving as the prospective employee. The student should be responsible for asking questions concerning information he would like to receive pertaining to the occupation for which he is being interviewed.

3. Invite a high school student or a student in the class who has been interviewed for a job to discuss with the class the questions that were asked the employer and the questions the employer asked.

4. Invite a business employer to the class. Involve this individual in relating the informative topics he usually discusses with a prospective new employee. Allow ample time for student questions.

   Note: This individual could possibly be a parent of one of the students.

5. Conduct discussion while showing transparency AGR-3, "Needed Occupational Information," page 20.

C. Suggested Evaluation

The student will write a brief paper, "What I Need to Know About an Occupation." Evaluate the paper based on the number of different informational facts included in the content.

D. Suggested Resources

1. Resource persons

   a. Guidance counselor
   b. Community businessmen
   c. Parents

2. Books

   a. Occupational Information, Ch. 3.

   b. I Find My Vocation, Ch. 3.

   c. Handbook of Agricultural Occupations, Ch. 1.

   d. Your Future in Agriculture, Ch. 1.

3. Transparency Master AGR-3, p. 20.

IV. The student will be able to list various occupations that are found within the community and state.

A. Suggested Content

1. Occupations of many types are present in most communities.

2. Examples of different occupations

a. Occupations related to business and office

(1) Clerical occupations
(2) Secretarial occupations
(3) Management occupations
(4) Business ownership occupations

b. Occupations related to marketing and distribution

(1) Management occupations
(2) Supervision occupations
(3) Marketing occupations

c. Occupations relating to construction

(1) Carpentry occupations
(2) Painting and decorating occupations
(3) Masonry occupations
(4) Plastering occupations

d. Occupations relating to transportation

(1) Land transportation occupations
(2) Water transportation occupations
(3) Aerospace transportation occupations

e. Occupations relating to agribusiness

(1) Production agribusiness occupations
(2) Supplies and services occupations
(3) Horticultural occupations
(4) Mechanics occupations
(5) Forestry occupations

f. Other occupations in the community or state

(1)
(2)
(3)

B. Suggested Teaching-Learning Activities

Note: The teacher should guide the student to recognize that many occupations are available within the community or state and that one primary area where occupations are available is in agribusiness.

1. Select a student in the class whose parents have different occupations, being sure to select a student whose parents are employed in agribusiness occupations. Involve the student in role playing the particular occupation or have the student discuss the various occupations.

2. Form a panel of resource people from different occupations within the community, being sure to select a person or persons from agribusiness. Have the resource people discuss their occupations. Suggest that the resource people dress as if they were on the job and that they bring to class with them various items that they use on the job.

3. Involve the students in developing a display of the occupations with which they are most familiar. Actual items, pictures, etc., may be used in the display.

4. Divide your students into teams and have them design a poster that includes a listing of the occupations found in the community or state. This poster can be illustrated, printed free hand, or lettered with stencil letters.

5. Divide the students into teams and have each team responsible for developing a poster relating to one occupational area. Included on the poster can be jobs within the occupational area, newspaper clippings concerning the occupational area, etc. Emphasis should be placed on developing a poster relating to agribusiness occupations.

6. Involve students in drawing illustrations or taking pictures of people in different occupations. Students can develop an occupational scrapbook.

7. Show transparency AGR-4, "Occupational Areas," page 21, and conduct a discussion.

8. Conduct a community occupational analysis. Select an occupational area such as agribusiness. Develop the county into geographical sections and assign specific students to specific sections. Have the students identify the occupations in that specific geographical section for the area being studied.

Note: Upon conclusion of these four objectives, the student should be oriented to the term occupation, why people work in an occupation and should be able to identify different occupations within the community or state. They should at this point realize that agribusiness is one major occupational area of their community or state.

C. Suggested Evaluation

The student will complete the form, "Match the Occupation to the Occupational Area," found on page 22. Evaluate the student based on the number of occupations matched to the correct occupational area.

D. Suggested Resources

1. Resource persons

   a. Parents of students
   b. Community resource people

2. Books

   a. Occupational Guidance, Ch. 2.

   b. I Find My Vocation, Ch. 11.

   c. Occupational Outlook Handbook, Bulletin 1700.

   d. An Analysis of the Fifteen Occupational Cluster Identified by the U. S. Office of Education.

   e. Occupations and Careers, Ch. 5.

3. Transparency Master AGR-4, p. 21.

V. The student will be able to construct an agribusiness exploratory resource file.

Note: Exploration of the agribusiness cluster cannot be accomplished without community involvement. Suggestions are presented for getting both the student and the community involved.

A. Suggested Content

1. People to get involved

a. Parents
b. Business people
c. Resource people

2. Sources of information

a. Professional associations
b. Businesses

B. Suggested Teaching-Learning Activities

Note: Student involvement is the key to this objective. The student can become involved in writing letters, calling people, contacting businesses which would aid in the exploration of the agribusiness cluster.

1. Teachers should guide the student in getting parents involved by helping the student

a. Compose a letter explaining the career exploration program and asking for their help. A sample letter may be found on page 23.

b. Devise a form which would get parent response concerning their willingness to assist. A sample form can be found on page 24.

c. Compose a thank-you letter to those willing to cooperate informing them of the date which they will be expected to talk to the class or be visited on a field trip. A sample letter can be found on page 25.

d. Accumulate a resource file of cooperating parents.

2. Teachers should guide the student in getting business people in the community involved by helping the student

   a. Develop a list of businesses in the area of agribusiness from the yellow pages, discussion, newspapers, or other sources.

   b. Follow steps a through d as outlined in 1 above, except for businesses in the community. The sample letters shown could be sent to businesses following minor modification.

3. Teachers should guide the student in securing materials from professional and business associations by helping the student

   a. Write letters to different professional associations asking for information concerning careers in their particular area. A list of professional organizations and their addresses may be found on page 26.

   b. Write for booklets, brochures, or leaflets from businesses in the area of agribusiness. A list of businesses and their addresses can be found on page 28.

   c. Make a display or a resource center of career exploration materials as they come into the classroom.

4. The teacher may want to divide the class into committees or teams, each responsible for a particular area or task.

C. Suggested Evaluation

The students as a group or as committees will develop a display or resource file of career materials in agribusiness. Evaluate the students' participation in developing the file.

D. Suggested Resources

1. Resource persons

   a. English teacher
   b. Business teacher
   c. Vocational agriculture teacher

# SUPPORTIVE MATERIALS FOR UNIT ONE

REFERENCE LIST FOR UNIT ONE

Books


1. An Analysis of the Fifteen Occupational Clusters Identified by the U.S. Office of Education, Grayson County College, Sherman/Denison, Texas.

2. Career Education in the Middle/Junior High School by Evans, Hoyt, and Mangum, Olympus Publishing Company.

3. Career Guidance: Who Needs It, Who Provides It, Who Can Improve It by Ginzbery, McGraw-Hill Publishing Company.

4. Handbook of Agricultural Occupations by Hoover, The Interstate Publishing Comapny.

5. I Find My Vocation by Kitson, McGraw-Hill Publishing Company.

6. Occupational Guidance by Chapman, Turner E. Smith and Company.

7. Occupational Information by Hoppach, McGraw-Hill Publishing Company.

8. Occupational Outlook Handbook, U.S. Department of Labor, Bureau of Labor Statistics.

9. Occupations and Careers by Greenleaf, McGraw-Hill Publishing Company.

10. Your Future in Agriculture by Hutchison, Richards Rosen Press, Incorporated.


*Addresses of publishers and distributors can be found in the Appendix.

## DEFINITION OF OCCUPATION

A Word Used To Describe An Individual's Principal Employment Role In Life

The Activity In Which An Adult Spends The Majority Of His Time

Examples Of Occupations

| | |
|---|---|
| Doctor | Artist |
| Teacher | Lawyer |

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## DEFINITION OF CAREER

The Sum Total Of The Work Done By A Person In His Employment

A Word Used To Refer To A Meaningful Progression In A Person's Working Life

Example Of Progress In A Political Career

1. Lawyer
2. County Judge
3. State Legislator
4. Governor or U.S. Senator

# REASONS FOR WORKING IN AN OCCUPATION

## Basic Reasons:

1. Provide for necessities of life
2. Express creativity
3. Provide for luxuries of life

## Other Reasons:

1. Security
2. Give individuals an opportunity to
   a. Achieve
   b. Gain recognition
   c. Receive promotions
3. Enable individuals to associate with others
4. Satisfaction

# NEEDED OCCUPATIONAL INFORMATION

1. Present and Future Employment Outlook

2. Nature Of The Occupation

    a. Duties Performed
    b. Advantages
    c. Disadvantages
    d. Working conditions

3. Personal Qualities Required

    a. Interests
    b. Physical Abilities
    c. Mental Abilities

4. Qualifications For Employment

    a. Formal Education
    b. On-The-Job Training
    c. Previous Job Training

# OCCUPATIONAL AREAS

1. Business and Office
2. Marketing and Distribution
3. Construction
4. Transportation
5. Health
6. Manufacturing
7. Consumer and Homemaking
8. Agribusiness
9. Other

## MATCH THE OCCUPATION TO THE OCCUPATIONAL AREA

Directions: Match the occupation on the left to the occupational area on the right. You may use the letters on the right more than one time.

| | | | |
|---|---|---|---|
| 1. | Secretary | _____ | A. Business and Office |
| 2. | Farmer | _____ | B. Marketing and Distribution |
| 3. | Carpenter | _____ | C. Construction |
| 4. | Doctor | _____ | D. Health |
| 5. | Salesman | _____ | E. Manufacturing |
| 6. | Florist | _____ | F. Consumer and Homemaking |
| 7. | Dietitian | _____ | G. Agribusiness |
| 8. | Painter | _____ | |
| 9. | Plant Manager | _____ | |
| 10. | Nurse | _____ | |

LETTER TO PARENTS

Dear _____,

We as a class are exploring the different careers in agribusiness. We understand that you are employed in this area. We need your help.

We would like to invite you to our class to discuss with us your occupation in the field of agribusiness. Please bring to class various items that you work with and, if possible, wear your work clothing.

Here are some areas which we would like for you to discuss:

1. What is your occupational title?
2. Where is the location of your place of employment?
3. What are the primary activities you engage in?
4. What is the primary function of your occupation?
5. Do you like or dislike your work? Why?
6. What is the general overview of your occupation in terms of working conditions, salary, etc.?

In the future we are also planning to take field trips. Would it be possible to visit you on a field trip?

Thanking you in advance for your help.

Respectfully,

RESPONSE FORM

NAME _____ PHONE _____

ADDRESS _____

OCCUPATION _____

I can _____ or cannot _____ visit your class to discuss my occupation.

I can visit the following days and times.

| DAYS | TIME |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

You can _____ or cannot _____ plan a field trip to visit me in my occupation.

The best day and time for field trip would be:

| DAYS | TIME |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

THANK YOU LETTER

Dear _____,

We appreciate your willingness to work with us in our career exploration program. It would not be possible to conduct such a program without the aid of individuals such as yourself.

We would like for you to visit our class _____date_____ at _____time_____.

Again we can only say thanks and we will be looking forward to hearing from you on the above mentioned date.

Respectfully,

Note: A similar letter could be used when planning field trips.

## PROFESSIONAL ASSOCIATIONS

American Society of Agricultural Engineers
St. Joseph
Michigan 49085

American Veterinary Medical Association
600 South Michigan Avenue
Chicago, Illinois 60605

Soil Conservation Society of America
7515 N.E. Ankeny Road
Ankey, Iowa 50021

American Society for Horticultural Science
P.O. Box 109
St. Joseph, Michigan 49085

The Society of American Foresters
1010 Sixteenth Street, N.W.
Washington, D.C. 20036

American Association of Nurserymen
835 Southern Building
Washington, D.C. 20005

Grain and Feed Dealers National Association
500 Folger Building
725 Fifteenth Street, N.W.
Washington, D.C. 20005

The National Landscape Nurserymen's Association
P.O. Box 4
Leesburg, Florida 32748

Farm Equipment Manufacturers Association
230 South Bemiston
St. Louis, Missouri 63105

Farm and Industrial Equipment Institute
410 North Michigan Avenue
Chicago, Illinois 60611

Agricultural Institute
Patterson Hall
North Carolina State University
Raleigh, North Carolina 27607

The American Society for Horticultural Science
615 Elm Street
St. Joseph, Michigan 49085

Weed Science Society of America
Agronomy Department
University of Illinois
Urbana, Illinois 61801

Institute of Food Technologists
176 West Adams Street
Chicago, Illinois 60603

American Society of Animal Science
39 Sheridan Avenue
Albany, New York 12210

Southern States Cooperative
Southern States Building
Seventh and Main Streets
Richmond, Virginia 23213

American Meat Institute
59 East Van Buren Street
Chicago, Illinois 60605

American Society of Agronomy
Crop Science Society of America
Soil Science Society of America
677 South Segoe Road
Madison, Wisconsin 53711

Midwest Feed Management Association
934 Wyandotte Street
Kansas City, Missouri 64105

Kentucky Farm Bureau
120 South Hubbard Lane
Louisville, Kentucky 46204

Kentucky Federation of Federal Land Bank
Post Office Box 1116
Bowling Green, Kentucky 42101

Kentucky Artificial Breeding Association
1930 Herr Lane
Louisville, Kentucky 40207

Kentucky Bankers Association, Inc.
425 South Fifth
Louisville, Kentucky 40202

Development Director
Kentucky Retail Federation, Inc.
Georgetown, Kentucky 40324

## BUSINESSES IN AGRIBUSINESS

1. Action/Peace Corps
   Jim Crowder
   Recruiter
   214 Pittsboro Street
   Chapel Hill, NC 27514

2. Allis Chalmers
   J. B. Needham
   Regional Manager
   Box 349, Highway 31 North
   Franklin, IN 46131

3. Allied Mills
   K. P. Mulvey
   Mgr. Selection and Placement
   110 North Walker Avenue
   Chicago, IL

4. Allied Mills, Inc.
   Richard E. Linder
   Regional Sales Manager
   7045 Madison Avenue
   Indianapolis, IN 46227

5. Aubrey Feed Mills, Inc.
   Charles Keen
   Sales Manager
   932 East Chestnut Street
   Louisville, KY 40204

6. Allis Chalmers
   Oris L. Miller
   Box 349, Highway 31 North
   Franklin, IN 46131

7. Burlington Northern
   Francis J. Coune
   Assistant Director
   176 East 5th Street
   St. Paul, MN 44101

8. Butler Manufacturing Company
   Mike Simmons
   7400 East 13th Street
   Kansas City, MO 64126

9. John J. Felcyn
   Senior Personnel Assistant
   James Ford Bell Technical Center
   9000 Plymouth Avenue North
   Minneapolis, MN 55427

10. Briggs & Stratton Corporation
    Leo J. Lechtenberg
    E.P. Engine Engineering
    P.O. Box 702
    Milwaukee, WI 53201

11. Bethlehem Steel
    Beth Elkhorn Division
    Albert Farley
    Surface Mining
    Jenkins, KY 41537

12. Belknap, Inc.
    James C. Lowery
    Personnel Manager
    P.O. Box 28
    Louisville, KY 40201

13. Buhler Mills
    Herbert Regee
    1835 Union Street
    Memphis, TN 38104

14. Convenient Industries
    Charles W. Cooper, Jr.
    Vice President
    Food Mart Operations
    P.O. Box 660
    Louisville, KY 40201

15. Cargill, Inc.
    Glen Magnuson
    Employment Manager
    1200 Cargill Building
    Minneapolis, MN 55402

16. Chevron Chemical
Marshall Mires
Suite 138, 352 Brooks
St. Louis, MO 63166

17. Cook Industries
Paul Koch
2221 Democrat Road
Memphis, TN 38131

18. J. I. Case
D. A. Busack
700 State Street
Racine, WI 53404

19. Cargill
Robert S. North
Director of College Programs
Cargill Building
Minneapolis, MN 55402

20. Caterpillar Tractor
Don Parris
Peoria, IL 61602

21. Central Soya
T. Albert Nicles
Corp Employment Supervisor
300 Fort Wayne, IN 46802

22. Hillard Smith
Dow
Building 9008
Midland, MI 43640

23. Doane Agricultural Services
Charles Paige
Personnel Manager
8900 Manchester Road
St. Louis, MO 63144

24. John Deere and Company
Richard Vanbell
3210 East 85 Street
Kansas City, MO 64132

25. Dairymen, Inc.
Jim McDowell
Kyana Division
P.O. Box 18118
Louisville, KY 40218

26. Dupont
Richard F. Rost
Assistant Regional Manager
5725 East River Road
Chicago, IL 60631

27. Elanco
Jim E. Meeker
Personnel
P.O. Box 1750
Indianapolis, IN 46206

28. John Deere and Company
V. V. Hadley
2105 Latham Street
P.O. Box 47
Memphis, TN 38101

29. Peter Echrich and Sons
Chalmer Borne, Manager
P.O. Box 388
Ft. Wayne, IN 46801

30. Funk Seed International, Inc.
F. L. Holder
Manager Personnel and Community Relations
1300 West Washington Street
Bloomington, IL 61701

31. Farmers Home Administration
John Burris
State Director
333 Waller Avenue
Lexington, KY 40505

32. Farm Credit Bank of Louisville
Claude L. Brock
Public Relations Director
224 East Broadway
Louisville, KY 40202

33. Federal Credit Bank of Louisville
Claude L. Brock
Public Relations Director
224 East Broadway
Louisville, KY 40202

34. Federal Chemical Company
L. F. Farison
Chief Agronomist
646 Starks Building
Louisville, KY 40202

35. Farm Quarterly, The
Bill Barksdale
222 East Central Parkway
Cincinnati, OH 45202

36. Farmland Industries
Terry Wilson
Recruiting
3315 North Oak Trafficway
Kansas City, MO

37. General Mills
John J. Feloyn
Senior Personnel Assistant
James Ford Bell Technical Center
9000 Plymouth Avenue North
Minneapolis, MN 55427

38. Geigy
East Central Regional Office
8790 Purdue Road
Indianapolis, IN

39. Jim Bennett
Indiana Farm Bureau
47 South Pennsylvania Avenue
Indianapolis, IN

40. W. B. Crawford
International Harvester Co.
Personnel and Public Affairs Manager
P.O. Box 28010
Columbus, OH 43228

41. E. D. Blank
Vice President
Sales Manager
Kentucky Machinery, Inc.
3800 Crittenden Drive
Louisville, KY 40221

42. Larry H. Columbia
Kroger Food Stores
Personnel Assistant
P.O. Box 778
7800 Crittenden Drive
Louisville, KY 40201

43. Rudy L. Vincenti
Vice President
Merrill Lynch, Pierce, Fenner & Smith, Inc.
425 South 5th Street
Louisville, KY 40202

44. Pat Richter
Corporate Recruiting Manager
Oscar Mayer and Company
910 Mayer Avenue
Madison, WI 53701

45. J. P. Youngblood
Monsanto
Professional Recruiting Manager
800 North Lindbergh Boulevard
St. Louis, MO

46. Warren Ware
Personnel Manager
Landmark, Inc.
245 North High Street
Columbus, OH

47. Harry Nalder
Natural Resources, Department of
Division of Forestry
Director
Frankfort, KY 40601

48. Mr. Frank Todd
MoorMan Manufacturing Company
749 Hampton Road
Bowling Green, KY 42101

49. Nelson Coleman
Proctor and Gamble
Ivory Dale Technical Center
Cincinnait, OH 45217

50. Leonard P. Nelson
Personnel Manager
Northrup, King and Company
1500 Jackson Street, N.E.
Minneapolis, MN

51. Deith McClintock
Management Chief
Dept. of Natural Resources
Frankfort, KY 40601

52. Hoyt D. Gardner
Phillip Morris, Inc.
Box 1498
Louisville, KY 40201

53. Don Hope
Pennwalt
111 Windsor Drive
Oak Brook, IL 60521

54. Gene A. Counard
Ralston Purina
Area Sales Manager
P.O. Box 21399
Louisville, KY 40221

55. Walker Stafford
Stauffer Chemical Company
630 Cardinal Lane
Lexington, KY 40503

56. Jim Parker
The Southland Corporation
1681 Union Avenue
Memphis, TN 38104

57. Carroll Gilbert
Southern States Cooperative
7th and Main Street
P.O. Box 1656
Richmond, VA 23213

58. William S. Lyke
Personnel Administrator
Ralston Purina
Checkerboard Square
St. Louis, MO 63188

59. Henry Holland
Personnel Officer
Soil Conservation Service
333 Waller Avenue
Lexington, KY 40504

60. Dick Rudich
Personnel Manager
A. O. Smith Harvestore
Arlington Heights, IL 60006

61. L. R. Conradt
Manager
Swift and Company
115 West Jackson Boulevard
Chicago, IL 60604

62. C. E. Schmidt
Winn Dixie
Divisional Manager
720 Locust Lane
Louisville, KY 40213

63. Dave Wrights
Personnel Management Specialist
U.S. Forest Service
27 Carol Road
Winchester, KY 40391

64. Charles Cason
Personnel Manager
U.S. Forest Service
27 Carol Road
Winchester, KY 40391

65. James Ransom
Chief, Public Services
TVA
Land Between the Lakes
P.O. Box 27
Golden Pond, KY 42231

66. John Norvell
Tobacco States
Trafton Street
Lexington, KY 40504

67. James B. Waler
Director of Training
Tennessee Farmers Cooperative
Lavergne, TN 37086

68. Ulya Ward - Frank Bolden
Thompson Hayward Chemicals
1585 Harber Avenue
Memphis, TN 38101

UNIT TWO

DEFINITION OF THE CLUSTER AREA

OF

AGRIBUSINESS

UNIT PURPOSE: To define the cluster area of agribusiness

PERFORMANCE OBEJCTIVES: The student will be able to

I. Identify the six job families in the agribusiness occupational cluster.

II. Describe how the agribusiness cluster area serves the student and the economy.

I. The student will be able to identify the six job families in the agribusiness occupational cluster.

Note: The student at this point is identifying the major job families without making an in-depth study.

A. Suggested Content

1. Major job families

a. Production agribusiness
b. Agricultural mechanics
c. Supplies and services
d. Agricultural products
e. Horticulture
f. Forestry

2. Definition of each job family

a. Production agribusiness

(1) Agricultural production includes a study of the following:

--Livestock
--Field crops
--Fruits and vegetables
--Fiber and other crops
--Economic use of land, labor, capital, and management
--Proper harvesting of agricultural products

(2) Agricultural production deals with the production of products on commercial or part time farms.

b. Agricultural mechanics

(1) Agricultural mechanics deals with the sales and service of agricultural machinery and related equipment.

(2) Agricultural mechanics deals primarily with the farmer in the production of his products.

c. Supplies and services

(1) Agricultural supplies deals with the activities of processing and selling of agricultural supplies such as the following:

--Fertilizer
--Chemicals
--Feed
--Seed

(2) Agricultural services deals with those activities (professional or otherwise) which aid in the production of an agribusiness product.

d. Agricultural products

(1) This area deals with the activities involved in the preparation of products for sale such as the following:

--Dairy products
--Meat
--Poultry
--Fruits and vegetables
--Cereal grains
--Non-food products (tobacco, wool, etc.)

e. Horticulture

(1) The area deals with the production, sales, and service in greenhouses, garden centers, and nurseries.

(2) Turf and landscape management is also included in this area.

f. Forestry

(1) Forestry deals with the growth and production of trees as a crop.

(2) Protection, logging, and wood utilization are also included in this area.

3. Common job titles in each family

a. Production

(1) General farmer
(2) Farm manager
(3) Dairy farmer
(4) Crop farmer

b. Agricultural mechanics

(1) Mechanic
(2) Machinery set-up man
(3) Machinery salesman
(4) Machinery service manager

c. Supplies and services

(1) Supplies manager
(2) Supplies salesman
(3) Extension agent
(4) Veterinarian

d. Agricultural products

(1) Meat processor
(2) Fruit inspector
(3) Vegetable inspector
(4) Livestock buyer

e. Horticulture

(1) Florist
(2) Greenhouse manager
(3) Golf course manager
(4) Landscape aid

f. Forestry

(1) Forest ranger
(2) Forestry aid
(3) Logger
(4) Saw mill operator

B. Suggested Teaching-Learning Activities

1. Involve the student in writing his present definition of agribusiness which would include the major job families as the student presently understands agribusiness, and then conduct an open class discussion.

2. Conduct a classroom discussion directed by the teacher concerning the different job families in agribusiness.

3. Use situational questions depending on the locality from which the student originates (rural, urban, or inner-city) to relate agribusiness to the student.

a. Example of situational question for student from urban area:

Johnnie is a young man who lives in an urban area. He lives in a subdivision, beautifully landscaped and attends a new school which won a ground beautification award given by the city each year. This morning at home his mom insisted that he drink two glasses of milk, eat one sausage or two pieces of bacon. How has Johnnie been involved in agribusiness that day?

b. Similar situational questions can be used to relate agribusiness to the inner-city and rural student.

4. Show the transparency AGR-5, "Your Career in Agribusiness," page 46, and conduct discussions concerning each job family.

5. Bring agricultural literature into the classroom or have the students research in the library or at home concerning the different areas in agribusiness.

   a. Examples of literature would be books which could be obtained from the agricultural teacher or farm magazines such as Farm Journal, Progressive Farmer, etc.

   b. Student could bring from home various articles relating to agribusiness and its definition.

   c. A career corner could be developed just for displaying materials and articles concerning agribusiness.

6. Involve the student in playing the game "What's My Job Family?" The game can be found on page 55.

7. Play the game of charades while role playing a particular job family or a particular job title within the family. The game can be found on page 56.

8. Play the game "Match the Job Title to the Job Family." The game can be found on page 57.

9. Involve the student in developing a family center. Develop a family card and a family area and place materials such as pictures, etc., depicting the particular job family in the center.

10. Involve the student in planning attractive bulletin board displays. Teacher may want to divide the students according to families and give a prize for the group that develops the best bulletin board display depicting their particular job family.

11. Present a slide or picture presentation of different types of agribusiness jobs.

12. Show transparencies, "What's My Job Family?", AGR-6 page 47, AGR-7 page 48, AGR-8 page 49, AGR-9 page 50, AGR-10 page 51, and AGR-11 page 52 and involve the student in selecting the correct job families.

13. Show transparency AGR-12, "Can You Pick the Right Job Family?", page 53, and involve the student in selecting the correct job family for the correct job titles.

C. Suggested Evaluation

1. Prepare a list of job families using examples in agribusiness and some in other occupational areas. The student will select those job families in agribusiness. Evaluate the student based on the number of correct selections.

2. Prepare a handout of job titles and job families in agribusiness. The student will match the job title to the job family. Evaluate the student based on the number of correct matches made.

D. Suggested Resources

1. Resource persons

   a. Vocational agricultural teacher

   b. County extension agent

   c. Soil conservation agent

2. Books

   a. Careers in Agribusiness and Industry, Chs. 1 and 2.

   b. Handbook of Agricultural Occupations, pp. 50-53.

   c. Experience Programs, Ch. 22.

3. Bulletins and Circulars

   a. "Should You Go Into Agriculture"

   b. "Choosing Agriculture For An Interesting Career"

4. Appendix of the guide

   a. Occupational Briefs, pp. 144.

   b. Job Titles in Agribusiness, pp. 169.

   c. Content Outline of Job Families, pp. 179.

5. Transparency Masters

   a. AGR 5-12, pp. 46-53.

II. The student will be able to describe how the agribusiness cluster area serves him and his economy.

A. Suggested Content

1. Development of civilizations down through history

a. Food

(1) Life cannot exist without food.

(2) Primitive man spent the majority of his hours in search of food.

(3) Agriculture began when primitive man started planting crops and raising animals instead of hunting wild plants and animals for food.

(4) A primary handicap of underdeveloped nations is the lack of food.

(5) Wars frequently develop because nations cannot produce food in adequate amounts.

(6) America is known as the land of plenty because of the abundance of food which it has.

b. Fiber and raw materials

(1) Clothing and other fabrics are produced from cotton and other agricultural timber.

c. Land for recreational use and vacation purposes

(1) As civilizations develop and less time is required for food production, more time can be devoted to recreation and leisure endeavors.

(2) Land is developed for parks, camp sites, and outdoor living.

(3) People spend more time in hunting, fishing, and sports.

2. How agribusiness serves the economy today

   a. Production of products

      (1) Vegetables
      (2) Feed
      (3) Fiber
      (4) Meat
      (5) Milk
      (6) Eggs
      (7) Trees
      (8) Flowers

   b. Furnishing of supplies and services needed in the production of products

      (1) Supplies for production
      (2) Mechanical aid for production
      (3) Processing of products

B. Suggested Teaching-Learning Activities

   1. Involve the student in a discussion of how agribusiness influenced the change in the American economy.

   2. Involve the student in writing a short historical paper of the role of agribusiness to America in its early development as compared to today.

   3. Involve the student in identifying the role of agribusiness in America today as compared to other less affluent nations.

      Note: The teacher may want to involve the history teacher in discussing the first three teaching-learning activities mentioned.

   4. Involve the student in a self-analysis relating self to the world of agribusiness.

      a. Questions to consider in the self-analysis:

         (1) What did I eat for my last meal and from where did it originate?

         (2) What am I wearing and what is its origin?

   5. Have the student discuss with their parents at home how the monthly paycheck is spent. The students may want to make a list of the items mentioned and the money spent for each. A discussion can be conducted examining the items listed which relate to agribusiness and the amount spent for those items.

6. Develop an agribusiness item center. The student can bring from home any items relating to agribusiness which are used or available. News items may also be used form magazines, books, etc. These items may be grouped according to job family.

7. Develop with the student a list of necessities required for survival and also a list of luxuries. Put these lists on the chalkboard and relate to agribusiness.

8. Show transparency AGR-13, "The Agribusiness Cycle," page 54, and discuss how the product goes from the farm to the consumer.

9. Make a list of businesses and discuss their function.

10. Bring to class various agribusiness products and tell how the products are used and produced.

C. Suggested Evaluation

The student will write a short paper, "Why Agribusiness Is Important to Me and My Economy." Evaluate the paper based on the number of reasons given for the importance of agribusiness.

D. Suggested Resources

1. Resource persons

   a. History teacher

   b. Vocational agriculture teacher

   c. Economics teacher

2. Books

   a. Experience Programs, Ch. 1.

   b. Careers in Agribusiness and Industry, Chs. 1 and 3.

   c. Exploring Agribusiness, Chs. 1 and 2.

3. Transparency Master AGR-13, p. 54.

# SUPPORTIVE MATERIALS FOR UNIT TWO

## REFERENCE LIST FOR UNIT TWO


Books

1. Careers in Agribusiness and Industry by Stone, The Interstate Publishing Company.

2. Experience Programs by Binkley and Hammonds, The Interstate Publishing Company.

3. Exploring Agribusiness by Roy, The Interstate Publishing Company.

4. Handbook of Agricultural Occupations by Hoomer, The Interstate Publishing Company.

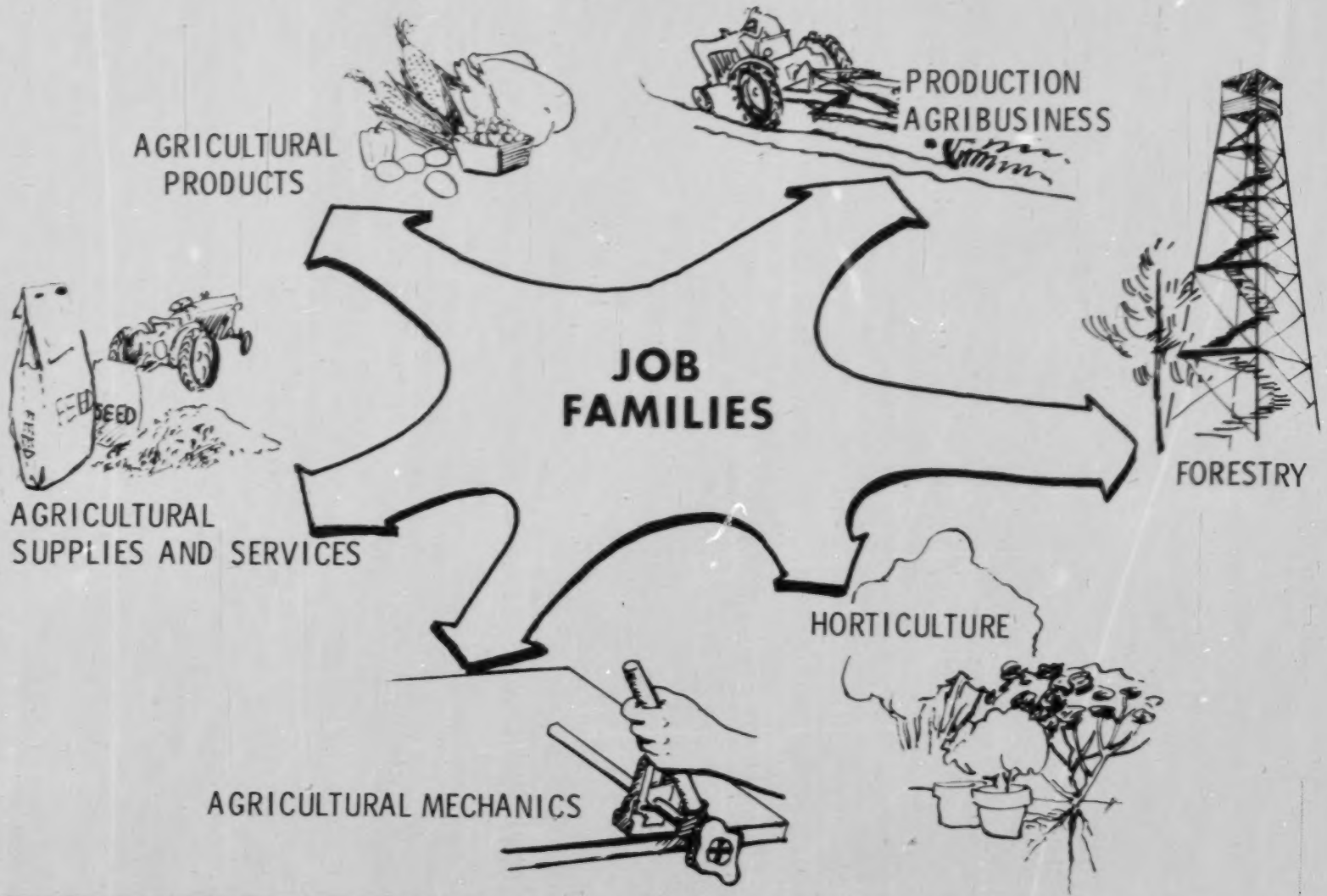
Bulletins and Circulars

1. "Choosing Agriculture for An Interesting Career," Professional Personnel Recruitment, American Vocational Association, 1510 H. Street, N.W., Washington, D.C. 20005.

2. "Should You Go Into Agriculture," Career Information Service, New York Life Insurance Company, Box 51, New York, New York 10010.


*Addresses of publishers and distributors can be found in the Appendix.

# "YOUR CAREER IN AGRIBUSINESS"



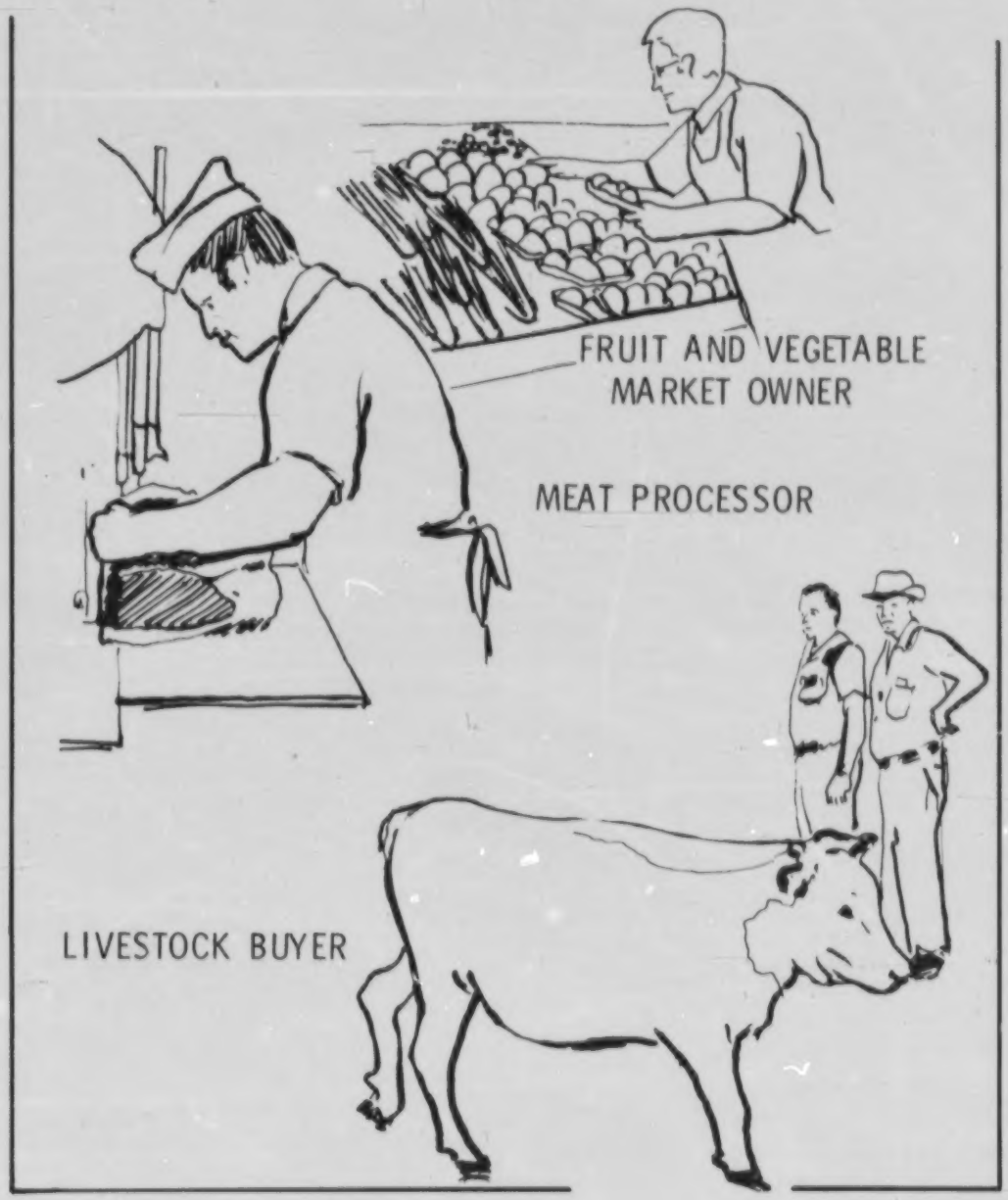

AGR-5

D. PHIPPS, CURR. DEV. CNTR. U.K. 967-1

# WHAT IS OUR JOB FAMILY ?

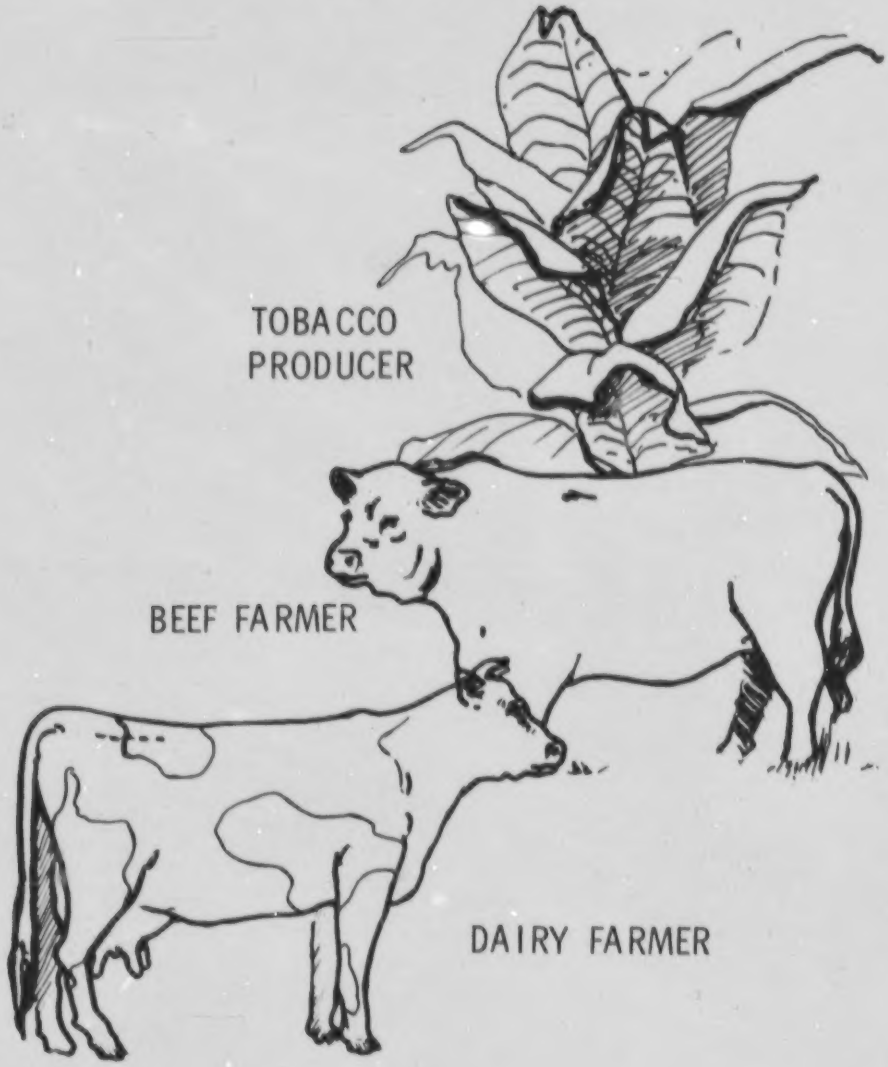
PHIPPS., CURR. DEV. CNTR., U.K. 967-4

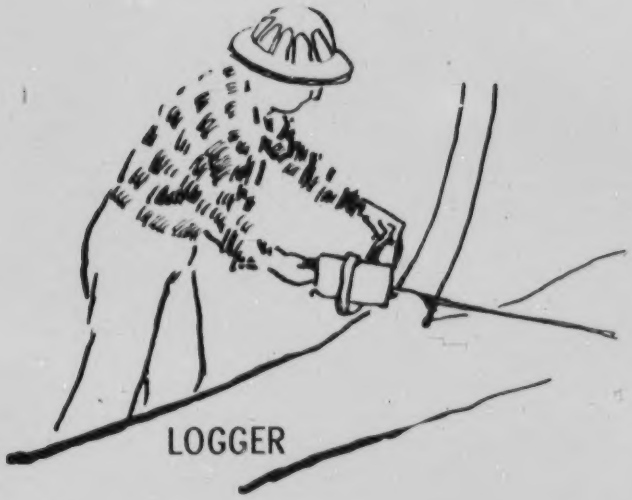
# WHAT IS OUR JOB FAMILY ?




D. PHIPPS, CURR. DEV. CNTR., U.E. 967-5

# WHAT IS OUR JOB FAMILY ?






# WHAT IS OUR JOB FAMILY ?

D. PHIPPS, CURR. DEV. CNTR, U.K. 967-7

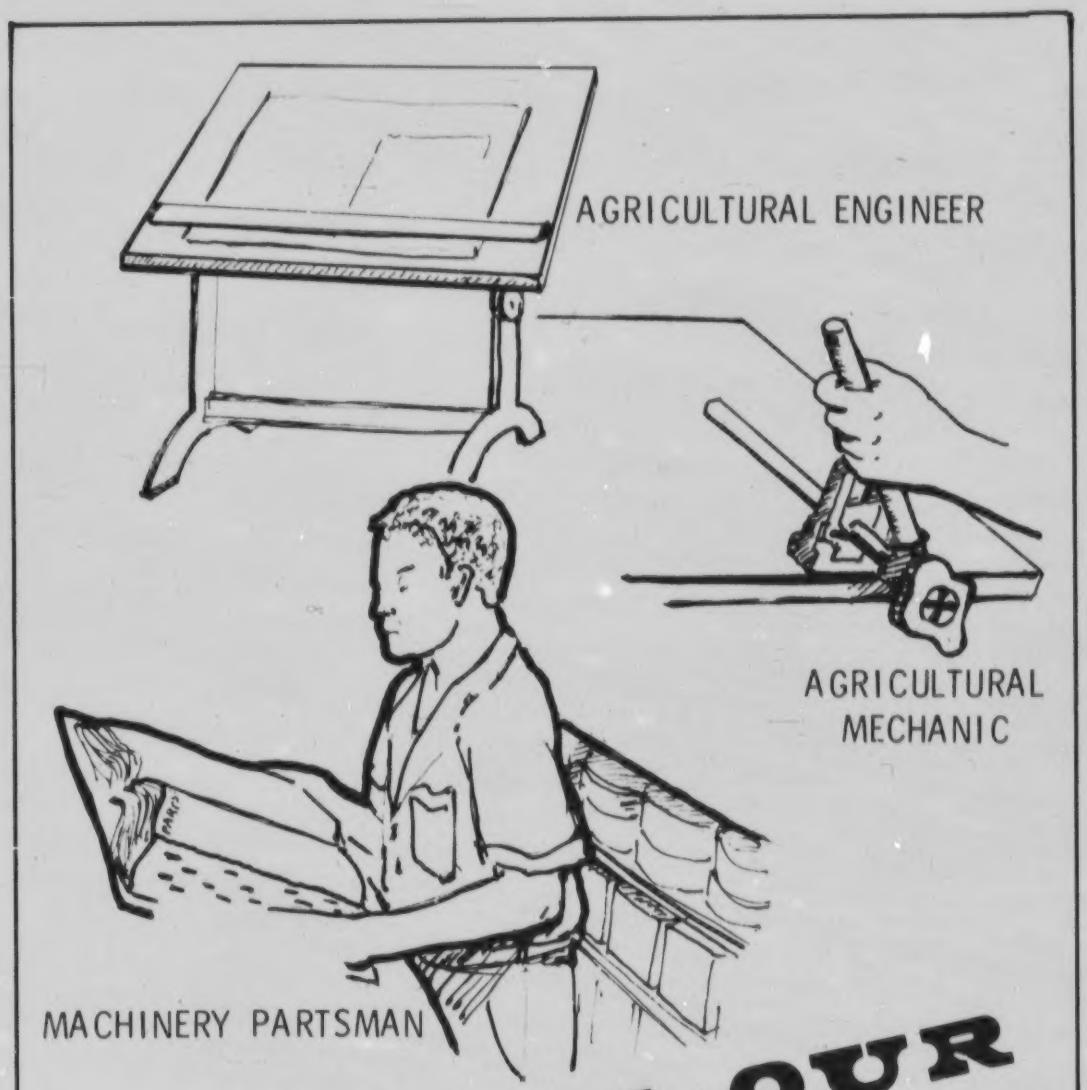
GOLF COURSE ATTENDANT

FLORIST

# WHAT IS OUR JOB FAMILY ?

GREENHOUSE MANAGER

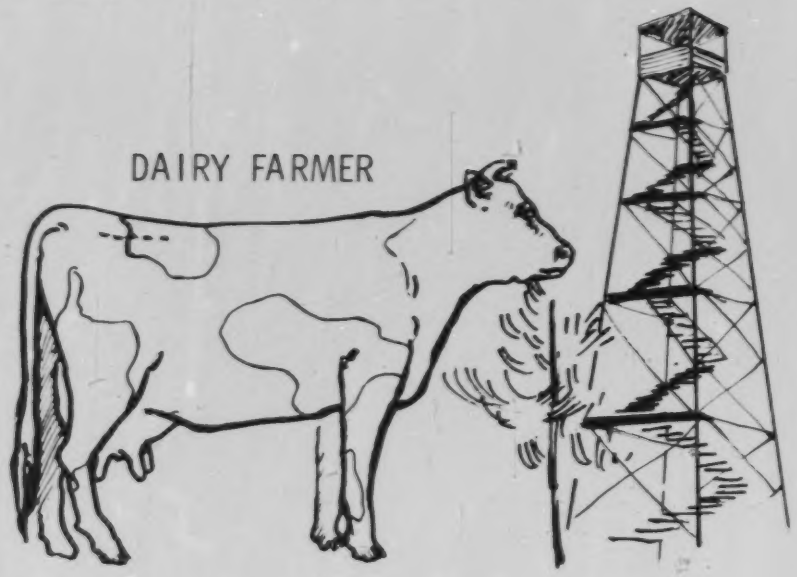
PHIPPS, CURR. DEV. CNTR., U.K. 967-8


AGRICULTURAL ENGINEER
AGRICULTURAL MECHANIC
MACHINERY PARTSMAN
WHAT IS OUR JOB FAMILY ?

PHIPPS, CURR. DEV. CNTR., U.K. 967-2

AGRICULTURAL MECHANIC

# CAN YOU PICK THE RIGHT JOB FAMILY?



DAIRY FARMER

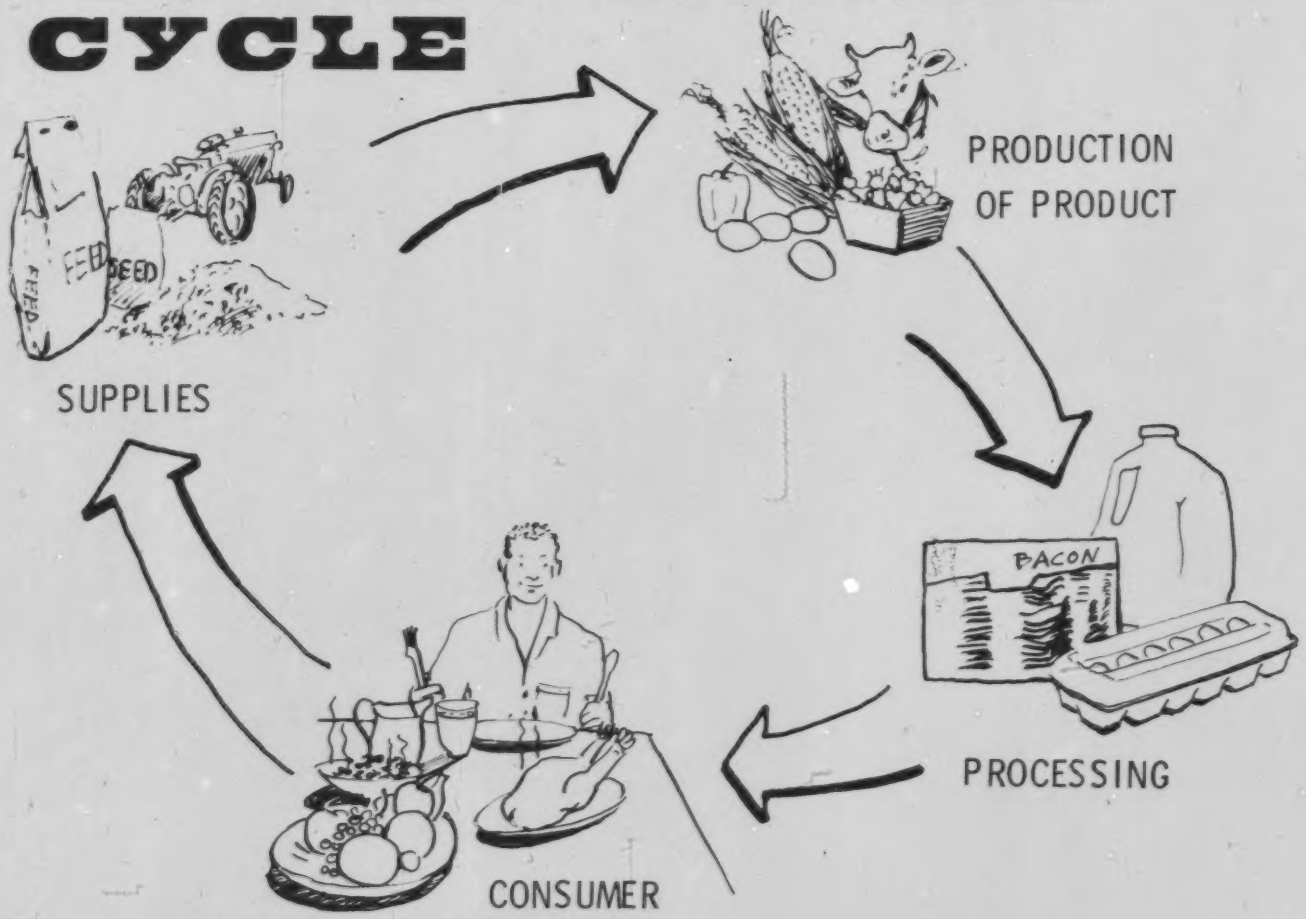
FORESTER

TEACHER OF VOCATIONAL AGRICULTURE

D. PHIPPS, CURR. DEV. CNTR., U.K. 1977-3



# THE AGRIBUSINESS CYCLE



## WHAT'S MY JOB FAMILY?

Directions:

You may want to divide the class into groups for competition concerning the identification of the correct job family. Prizes may be given to the winning team. Present each team with a list of the six different job families either by showing a transparency of the different job families, making job family cards, or just writing the job families on the board.

Then refer to the occupational briefs found on page 121 in the guide and select different briefs relating to each job family area. Pick out certain key characteristics of each job and read the characteristics to the teams. The first team who identifies the job family into which each job fits wins. You can also use the content outline of the different job families, found on page 179 in the guide, to select characteristics to be used in the contest.

A similar contest entitled "What's My Job Title?" could also be used following the same principle. The list of job titles found on page 169 in the guide could be used.

## CHARADES

Charades is a game in which all the students or groups of students could become involved in play acting or role playing different job families or job titles.

Begin by assigning a student or a group of students a particular job family or job within the family. Then supply the student with the occupational brief or the sources of information concerning the job or job family which he is going to role play. Involve each student or groups of students in developing his own strategy for role playing the particular job or job family.

Have each student role play before the class and have the class try to guess the job family or job title the student is depicting. Prizes may be given to the best actor and also the student who identifies the most roles.

MATCH THE JOB TITLE TO THE JOB FAMILY

Directions: This game may be played in different ways. Included below are some suggested alternatives.

Suggestion 1

Assign each student with five job titles and have him individually, through research, determine the correct job family for each job title.

Suggestion 2

Give each student or group of students a list of the different job families. Then you, as a teacher, read a certain job title. Have the student who knows the answer stand, give his answer and his reasons for choosing that answer.

Suggestion 3

Prepare a handout listing different job titles and job families. Have the student match the job title to the job family in agribusiness.

The Occupational Briefs found on page 144 and the Job Titles found on page 169 can be used with this exercise.

UNIT THREE

EXPLORATION

OF THE

AGRIBUSINESS CLUSTER

UNIT PURPOSE: To explore the agribusiness cluster.

PERFORMANCE OBJECTIVES: The student will be able to

I. Present an overview of the total agribusiness cluster.

II. Describe in depth at least two agribusiness occupations.

III. Participate in hands on activities which relate to the agribusiness cluster.

I. The student will be able to present an overview of the total agribusiness cluster.

Note: The purpose of this objective is not to study specific jobs but to get an overview of the agribusiness cluster.

A. Suggested Content

1. Information to secure

a. Location of the business or area visited or studied

b. Name of the business or person visited or studied

c. Job family observed

d. Primary function

e. Major activities being conducted

f. Competencies required for success in the general job family

g. General overview of the family observed

(1) Working conditions
(2) Items working with
(3) Major tasks performed

2. Means of securing information

a. Field trips

b. Literature

c. Films and other audio-visual aids

d. Resource people

e. Other

B. Suggested Teaching-Learning Activities

1. Form career exploration clubs or committees hinging around major job families in agribusiness.

a. Club examples

(1) Production Agribusiness Club
(2) Horticultural Club
(3) Mechanics Club
(4) Supplies and Services Club
(5) Agribusiness Products Club
(6) Forestry Club

b. Clubs may want to elect officers and hold meetings.

c. Club members may be selected based on student performance or randomly assigned by the teacher.

2. The teacher should hold each club responsible for using the list of resources developed upon completion of Objective V in Unit One for exploring their particular job family area.

   a. Example--Horticulture Club explore the job family of horticulture, Mechanics Club explore the job family area of mechanics, etc.

3. Teacher should aid each club in locating materials, setting up field trips, and identifying films, etc.

4. Clubs should select field trips that relate to their particular family.

   a. Suggested visitation areas for each job family

      (1) Production agribusiness

      --Dairy farm
      --Beef farm
      --Tobacco farm
      --Feed lot
      --Poultry farm
      --Horse farm

      (2) Supplies and services

      --Southern States
      --Local feed mill
      --PCA
      --Farmers Home Administration
      --ASCS-SCS

      (3) Agricultural mechanics

      --Home shops
      --Machinery assembly plants
      --Machinery dealers
      --Machinery centers

      (4) Agricultural products

      --Livestock market
      --Packing plant
      --Processing plant
      --Local grain elevator
      --Lumber yard

(5) Horticulture

--Golf course
--Nursery
--Greenhouse
--Florist
--Fruit farm

(6) Forestry

--Woodlot
--Wood processing plant
--Saw mill
--State forest area

5. Club members should have exploration form while on the field trip to record observed information. A sample exploration form is on page 89.

   Note: Teacher may want to practice with the student filling out the form before the actual trip.

6. Teacher, in close cooperation with club members, should plan every detail of the trip. If it is decided and can be arranged that different clubs will take different trips, additional help in the form of parents or teacher aides may be required.

7. Club members can collect exploration information in the following ways:

   a. Fill out exploration form.

   b. Take pictures.

   c. Carry a tape recorder or cassett and record happenings.

   d. Collect materials, brochures, and leaflets.

8. Each club should share exploration experiences with the other class members.

   a. Teacher may want to designate certain days as club days.

   b. Clubs may share exploration experiences in the following ways:

      --Develop a club exploration center.
      --Give oral or written class reports.
      --Show photographs or slides taken.
      --Show or display the literature collected.
      --Conduct club discussions.
      --Form club panels for question and answer sessions.

9. Teachers can also direct clubs in securing exploration information from books, films or other means. An exploration form should also be used. An example of an audio visual exploration report can be found on page 90.

Note: The teacher may make the decision that the class should not be divided into clubs or committees, but will choose to explore all the job families with all the class members. This will depend on time and teacher preference. The teaching-learning activities suggested can also be applied if exploring all the job families as a total group.

C. Suggested Evaluation

The student will present to the class, in the form of an oral report, the information he secured concerning the job family he explored. Evaluate the report based on the amount of information obtained.

D. Suggested Resources

Note: The resources will be broken down according to job family area.

1. Resource persons

a. Production agribusiness

(1) Livestock farmer
(2) Poultry farmer
(3) Feed lot manager
(4) Crop farmer
(5) County agricultural agent
(6) Vocational agriculture teacher
(7) Other

b. Supplies and service

(1) Fertilizer fieldman
(2) Credit manager
(3) Elevator manager
(4) Feed representative
(5) County agricultural agent
(6) Vocational agriculture teacher
(7) Other

c. Agricultural mechanics

(1) Engineers
(2) Mechanics
(3) Salesman
(4) Welding instructor
(5) Woodworking or carpentry instructor
(6) Other

d. Agricultural products

(1) Meat cutter
(2) Livestock buyer
(3) Livestock trucker
(4) Dairy plant manager
(5) Meat processing plant manager
(6) Livestock commission man
(7) Other

e. Horticulture

(1) Nursery man
(2) Florist
(3) Vegetable producer
(4) Fruit producer
(5) Fruit stand operator
(6) Horticulture instructor
(7) Other

f. Forestry

(1) Science teacher
(2) Biology teacher
(3) Game warden
(4) Logger
(5) State forester
(6) Private forester
(7) Other

2. Books

a. Agribusiness Careers in General

(1) See page 84 for complete reference list for Unit Three.

b. Production Agribusiness

(1) See page 84 for complete reference list for Unit Three.

c. Supplies and Services

(1) See page 84 for complete reference list for Unit Three.

d. Agricultural Mechanics

(1) See page 84 for complete reference list for Unit Three.

e. Agricultural Products

(1) See page 84 for complete reference list for Unit Three.

f. Horticulture

(1) See page 84 for complete reference list for Unit Three.

g. Forestry

(1) See page 84 for complete reference list for Unit Three.

3. Films

a. See page 84 for complete reference list for Unit Three.

II. The student will be able to describe in depth at least two agribusiness occupations.

A. Suggested Content

1. Method of in-depth study

a. Interview
b. Observation
c. Resource people in classroom
d. Media
e. Literature

2. Information to secure

a. Specific job title name

b. Employment outlook

(1) Present
(2) Future

c. Nature of the work

(1) Duties performed
(2) Advantages of the job
(3) Disadvantages of the job
(4) Working conditions

--Salary
--Hours
--Fringe benefits

d. Personal qualities required

(1) Interests
(2) Physical abilities
(3) Mental abilities

e. Qualifications for employment

(1) Formal education
(2) On-the-job training
(3) Previous work experience

B. Suggested Teaching-Learning Activities

1. The teacher should aid the student in narrowing down his interest to a particular job family or job families; then to specific jot titles within the family.

   Note: Previous learning should provide the base for the student to narrow his choice down to a particular job title within a job family. This is not to say that the student has finalized his career choice.

2. The teacher should hold each student responsible for exploring in depth and securing information, as outlined under content, for at least two jobs.

3. The teacher should aid each student in planning his strategy for the in-depth study. Assistance should be given in setting up interviews, locating resource people, or securing media.

4. The resource file developed by the student in Objective V, Unit One should provide an excellent base from which to secure exploratory ideas.

5. Student, with aid from teacher, should develop a form for recording information while interviewing, observing, or studying the literature. A sample form can be found on pages 91-92.

6. Information can also be collected as outlined in Activity 7 of the previous objective, page 63.

7. The teacher should have each student report orally to the class concerning the specific jobs observed. Time should be allowed for questions and discussions.

8. The teacher can aid the student in choosing from the following resource people as identified in the resource file.

   a. Production agribusiness

      (1) Livestock farmer
      (2) Crop farmer
      (3) Feed lot manager
      (4) County agricultural agent

   b. Supplies and services

      (1) Credit manager
      (2) Vocational agriculture teacher
      (3) Fertilizer fieldman
      (4) Manager of local feed mill or Southern States

c. Mechanics

(1) Agricultural engineer
(2) Mechanic
(3) Machine salesman
(4) Machine fieldman

d. Products

(1) Meat cutter
(2) Livestock buyer
(3) Dairy products fieldman
(4) Processing plant manager

e. Horticulture

(1) Florist
(2) Nurseryman
(3) Vegetable producer
(4) Fruit stand operator

f. Forestry

(1) State or private forester
(2) Logger
(3) Timber buyer
(4) Forestry manager

Note: The teacher may make the decision that the individual in-depth exploration is not feasible due to lack of time and teacher preference. In-depth study can be conducted in groups or even as a total class.

9. Involve the student in studying occupational briefs as found in the guide, on pages 144-168, or presented in the reference material.

10. Involve the student in an in-depth investigation of literature and media concerning various jobs.

C. Suggested Evaluation

The student will develop a notebook or folder containing information which he has collected or developed related to the jobs explored in depth. Evaluate the folder or notebook based on the adequacy of development.

D. Suggested Resources

Note: The resources as outlined under the previous objective can be adapted to the in-depth study of specific jobs in agribusiness.

1. Books

   a. Career Opportunities for Technicians and Specialist.

2. Bulletins and Circulars

   a. See page 84 for complete reference list for Unit Three.

3. Films

   a. See page 84 for complete reference list for Unit Three.

4. Appendix of the Guide

   a. Occupational Briefs found on pages 144-168.

III. The student will be able to participate in hands-on activities which relate to the agribusiness cluster.

A. Suggested Content

1. Activities relating to production agribusiness

a. Figuring cost and returns on one acre of tobacco

b. Marketing livestock

2. Activities relating to supplies, services, and products

a. Accumulation of information concerning an agribusiness product

b. Setting up a simulated supply store or produce market

3. Activities relating to agricultural mechanics

a. Identification and use of simple hand tools

b. Constructing a flat for growing agricultural products

4. Activities relating to horticulture

a. Mixing soil for growing plants

b. Germinating seed

5. Activities relating to forestry

a. Fertilizing mature tree

b. Planting a tree

B. Suggested Teaching-Learning Activities

1. Involve the student in activities relating to production agribusiness.

a. Figure cost and returns on one acre of tobacco.

(1) Take a field trip to a local tobacco farm, or bring a tobacco farmer into the classroom as a resource person.

(2) Involve the student in asking questions concerning items used in producing tobacco, returns per acre, etc.

(3) Set situation by discussing with the student the importance of tobacco to Kentucky farmers.

(4) Divide class into groups or let them work individually.

(5) Duplicate and pass out handout, "How Much Did Johnnie Make?" on page 93.

(6) Involve the student in figuring:

--Total cost
--Total returns
--Net returns

(7) You may want to omit the prices of various items such as fertilizer or insurance and have the student call the local insurance agent or fertilizer plant for prices.

b. Figure cost and returns on one mare and foal to weaning.

(1) Take a trip to a local horse farm, or bring a farmer or student into the class who raises horses.

(2) Set situation by discussing with the students the importance of horses to Kentucky.

(3) Divide the class into groups or let them work individually.

(4) Duplicate and pass out handout, "How Much Did Sally Make?" on page 94.

(5) Involve the students in figuring:

--Total cost
--Total returns
--Net returns

c. Figure cost and returns on one acre of strawberries.

(1) Duplicate and pass out handout, "How Much Did Jim and Jane Make?" on page 95.

(2) Involve the students in figuring:

--Total cost
--Total returns
--Net returns

d. Market Livestock

(1) Take a field trip to an auction market.

(2) Have the student pay close attention to the auctioneer.

(3) Talk to the owner of the market or auctioneer concerning jobs of the market.

(4) Invite owner or auctioneer to classroom for further exhibition of selling procedures and discussion.

(5) Simulate auction sale in shop or classroom.

--Bring animals to the shop which will serve as selling arena.
--Have different students roleplay roles of auctioneer, market owner, market worker, buyer, and seller.
--Have auctioneer actually sell animals.
--Rotate students so each can play the different roles of selling livestock.
--Simulate auction market in classroom if shop and live animals are not available.
--Use stuffed or play animals and follow the steps indicated above.
--Involve students in writing summary of happenings occurring when marketing livestock.

e. Involve the student in other activities relating to production agribusiness.

(1) Judge livestock or crops.

(2) Identify seeds.

(3) Drive a tractor in a tractor driving contest.

(4) Grade tobacco.

(5) Castrate or dehorn farm animals.

(6) Figure cost and returns on other enterprises such as soybeans, corn, milk, etc.

2. Involve the student in activities relating to supplies and services and products.

   a. Accumulate information concerning an agribusiness supply or product.

      (1) Develop information sheet which can be used by the student to gather information concerning a particular agribusiness product. Sample form can be found on page 96. Form can be modified depending on product which is to be examined.

      (2) Take field trip to supply store, and involve students in collecting information. Before taking field trip, develop list of supply items and have student select item he is interested in studying before the actual field trip.

      (3) If field trip is not feasible, have student visit supply store alone after school hours to collect information concerning a certain product.

      (4) Involve student in giving oral report to class concerning the product he studied and also the experiences he encountered while studying this product.

      Note: If possible, the product or a picture of the product should be brought to the class.

   b. Set up simulated supply store or produce market.

      (1) Set situation by conducting a student-involved discussion concerning what takes place during a sales transaction.

      (2) Involve student in roleplaying various individuals such as store owner, store employees, customer, etc.

      (3) Bring various items into the classroom. These items could be borrowed from the local supply store or students could bring them from home.

      (4) Have students involved in actual sales transaction, the use of the cash register, and keeping records of sales.

      (5) Have students register complaints with the store owner concerning certain products.

      (6) Rotate students so various students play various roles.

c. Involve students in other activities relating to supplies and services and products.

(1) Fill out sales tickets.

Note: This activity could be included in the activity mentioned above.

(2) Prepare a store display.

(3) Involve students in writing their response to various customer comments and questions. See page 97 for sample comments and questions.

(4) Identify cuts of meat.

(5) Inspect various fruits and vegetables for quality.

(6) Involve students in grading papers or teaching part of a class period.

3. Involve students in activities relating to agricultural mechanics.

a. Identify and use simple hand tools.

(1) Bring a number of simple hand tools into the classroom or shop such as the following:

--Hammer
--Handsaw or electric saw
--Wood plane
--Brace and bit
--Level
--Pipe wrench
--Screwdriver
--Number of tools will depend on decision of teacher and availability of tools.
--Tools can be obtained from vocational agriculture or industrial arts department.

(2) Divide the class into teams, and have teams rotate around the classroom or shop and stop at different stations to identify the tools and their use.

(3) Teams should also identify an occupation in agribusiness which uses the tool.

--Hammer may be used by farmer, mechanic, or barn builder.
--Screwdriver may be used by mechanic or farmer.

(4) *Team members should also* be given the opportunity to use the tool.

--Involve team members in sawing a board or driving a nail.
--Involve team members in properly reading a level or boring a hole in a piece of lumber with a brace and bit.
--Involve the students in constructing a project which would involve the use of the tools, such as building a nail box, picnic table, or wagon flat.

b. Construct a flat for growing horticultural plants.

Note: This flat may be used in relation to the activities suggested under horticulture.

(1) Obtain materials from vocational agriculture or industrial arts department or the local lumber yard. (Redwood or pine preferred)

(2) Materials needed:

| Item | Amount | Size |
|---|---|---|
| Ends | 2 | 3/4" x 4" x 23" |
| Sides | 2 | 1/2" x 4" x 23" |
| Bottom | 4 | 1/2" x 4" x 23" |
| Nails | 1/4 lb. | 4d or 6d |

(3) Divide students into teams, or let them work individually in constructing the flat.

(4) Nail the ends and sides together using the 4d or 6d nails and allow 3/8" crack between the bottom boards. See transparency, "Flat Construction," AGR-14, page 98.

(5) Stress the fact that these types of construction activities may be engaged in by the horticulturist, the agricultural builder, or the farmer.

c. Involve the student in other activities relating to agricultural mechanics.

(1) Change oil on farm tractor.

(2) Replace a sparkplug.

(3) Strike a welding arc and run a bead.

(4) Cut and thread an end of pipe.

(5) Wire a simple switch and light circuit.

(6) Tear down a junk lawnmower and identify the major parts.

4. Involve the student in activities relating to horticulture.

a. Mix soil for growing plants.

Note: This activity can be combined with the next activity to enable students to grow plants.

(1) Stimulate interest by asking questions concerning how plants are grown.

(2) Involve the student in attempting to answer questions concerning plant production.

(3) Secure containers in the form of buckets from agricultural shop or other sources to use in mixing soil.

(4) Obtain soil, sand, and peat moss from local garden center or chain store.

Note: Amount of mix needed will depend on number of students. Directions for amount to buy can be obtained from garden center employee.

(5) Mix should contain one part sand, one part peat moss, and two parts soil.

Note: May decide to use pure soil.

(6) Soak peat moss.

(7) Stir mixture well in container using trowel or any mixing device.

(8) Keep mixture moistened for use.

b. Germinate seed.

(1) Secure seed flats or milk cartons. (See activity 3 under mechanics for the construction of the seed flat.)

(2) Secure small seeds such as petunias, snap dragons, zinnias, etc., from local garden center.

Note: The student may bring seeds from home.

(3) Plant seeds in soil mixture, as described in activity 4a, in a seed flat or a half section of a milk carton or other flat container.

(4) Fill the container or flat up to 3/4 inch from the top with the soil mixture.

(5) Level and firm the soil by using a 1" by 3" board, and sprinkle soil lightly.

(6) Spread 1/4 inch of vermiculite, which can be obtained at any chain store or garden center, over the soil and level.

(7) Mark rows in the vermiculite with the row marker 2" apart and 1/8" deep.

(8) Sow seed thinly and uniformly by tapping lightly the sides of the seed package.

(9) Cover the seeds with a thin layer of vermiculite and moisten lightly.

(10) Cover flat or container with plastic and place in a partially shaded location where temperature is approximately 70°.

(11) Remove the plastic as the seeds begin to germinate.

(12) Water until two leaves appear on the plants.

(13) Transplant into milk container if grown in flat, and student can take plant home.

Note: While germination is taking place, students can participate in other hands-on activities or other learnings.

c. Involve students in other activities relating to horticulture.

(1) Prune shrubs.

(2) Draw picture of home landscape; then discuss how landscaping could be improved.

(3) Identify different types of vegetables.

(4) Identify different types of flowers.

5. Involve students in activities relating to forestry.

a. Fertilize mature trees.

(1) Set situation by discussing importance of fertilizer to the growth of large trees.

Note: Use resource person in horticulture.

(2) Obtain predetermined amount of 12-6-4 fertilizer from local supply store.

(3) Obtain soil auger (power or hand) from agricultural shop, county agent, or local conservation service.

(4) Measure 8-12 feet from the trunk of the tree and make a circle around the tree.

(5) Make additional circles 2 feet from the last circle made till you reach approximately two feet beyond the outer branches of the tree.

(6) Mark the spots for the holes in the circles 2 feet apart.

(7) Drill the holes with the auger 18 inches deep.

(8) Determine the amount of fertilizer to use by measuring the diameter of the trunk of the tree 60" from the ground and allowing 2 pounds of your 12-6-4 mixture for each inch of trunk diameter.

(9) Divide the number of pounds determined by the number of holes made to determine the amount of 12-6-4 to put in each hole.

(10) Refill the holes with soil after placing equal amounts of fertilizer in each hole.

(11) Water long enough to allow 1 inch of water to the surface.

b. Plant a tree on the school grounds.

(1) Secure a tree suitable for planting from the local garden center.

(2) Keep roots of tree moist till planting time.

(3) Dig the hole for planting deep enough so the plant will rest in the hole at the same level as it was growing.

(4) Dig the hole wide enough to accommodate the spread of the roots or 50-75 percent wider than the container if the tree is balled.

(5) Save the good top soil to place around the roots.

(6) Mix topsoil with organic matter such as peat moss or composted leaves.

(7) Prevent twisting of the roots in the hole.

(8) Refill the hole with soil making sure to use topsoil around the roots.

(9) Prepare a low ridge with extra soil about 3 inches high along the edge of the hole forming a shallow container to hold moisture when watering.

(10) Water thoroughly after planting.

(11) Stabilize the tree if over 1" in diameter.

(12) Show transparency AGR-15, "Tree Planting," page 99, and discuss procedures with the class before planting actual tree.

c. Involve students in other activities relating to forestry.

(1) Collect and identify leaves and make a scrapbook of them.

(2) Cut a small tree and identify phloem, cambium, and xylem.

Note: Involve biology teacher as a resource person for these two suggested activities.

(3) Identify different types of trees.

(4) Figure board feet of lumber.

C. Suggested Evaluation

The primary purpose of this objective is to involve the student in participating in hands-on activities common to the different job families in agribusiness, not to develop vocational skills. Therefore, the student should be evaluated based on his degree of participation, not on the skills he displays. Develop a participation rating scale of 1 to 10 with 10 being the highest score one can attain. Rate each student for each activity in which he is involved.

D. Suggested Resources

1. Resource persons

   a. Vocational agriculture teacher

   b. County extension agent

   c. Resource people can be selected from those presented for the first objective of the exploratory unit, pp. 64-65.

2. Transparency Masters AGR-14 and AGR-15, pp. 98-99.

# SUPPORTIVE MATERIALS FOR UNIT THREE

82/83

REFERENCE LIST FOR UNIT THREE

Books


1. Agribusiness Careers in General

   a. Career Opportunities for Technicians and Specialist, J. G. Ferguson Publishing Company.

   b. Encyclopedia of Careers and Vocational Guidance, Volume II by Hopke, J. G. Ferguson Publishing Company.

   c. Experience Programs for Learning Vocations in Agriculture by Binkley and Hammonds, The Interstate Publishing Company.

   d. Exploring Agriculture by Evans and Donahue, Prentice Hall.

   e. Handbook of Agricultural Occupations by Hoover, The Interstate Publishing Company.

   f. Occupational Outlook Handbook, 1974-73 Edition, U. S. Department of Labor.

   g. Your Future in Agriculture by Hutchison, Richards Rosen Press, Inc.

2. Production Agribusiness

   a. Animal Science by Ensminger, The Interstate Publishing Company.

   b. Approved Practices in Farm Management by Mortinson and Hall, The Interstate Publishing Company.

   c. Beef Production in the South by Fowler, The Interstate Publishing Company.

   d. Dairy Production by Bundy and Diggins, Prentice Hall.

   e. Introduction to Livestock Production by W. H. Cole, Freeman and Company

   f. Modern Corn Production by Aldrich and Leng, The Farm Quarterly.

   g. Our Soils and Their Management by Donahue, The Interstate Publishing Company.

   h. Sheep Production by Bundy and Diggins, Prentice Hall.

   i. Swine Production by Bundy and Diggins, Prentice Hall.

3. Supplies and Services

   a. Careers in Agribusiness and Industry by Archie Stone, The Interstate Publishing Company.

   b. Careers in Farm Services, Vocational Education Publications, California State Polytechnic College, San Luis Obispo, California 93401.

   c. Careers in Farm Supplies, Vocational Education Publications, California State Polytechnic College, San Luis Obispo, California 93401.

   d. Exploring Agribusiness by Ewell Ray, The Interstate Publishing Company.

4. Agricultural Mechanics

   a. The Farm Shop by Wakeman and McCoy, The Macmillan Company.

   b. Your Springboard to a Rewarding Career in the Farm and Industrial Equipment Industry, Farm and Industrial Institute, 410 North Michigan Avenue, Chicago, IL 60601.

5. Agricultural Products

   a. Careers in Agribusiness and Industry by Archie Stone, The Interstate Publishing Company.

   b. Exploring Agribusiness by Ewell Ray, The Interstate Publishing Company.

   c. The Marketing of Livestock and Meat by Fowler, The Interstate Publishing Company.

   d. Modern Marketing of Farm Products by Mortenson, The Interstate Publishing Company.

6. Horticulture

   a. Approved Practices in Fruit Production by Scheer and Juergenson, The Interstate Publishing Company.

   b. Career Opportunities in Ornamental Horticulture--The Florist Industry, American Association of Nurserymen.

c. Exploring Occupational Opportunities in Ornamental Horticulture, Ohio State University, Columbus, Ohio.

d. Ornamental Horticulture as a Vocation by Moore, Mor-Mac Publishing Company.

e. Producing Vegetable Crops by Ware and McCollin, The Interstate Publishing Company.

f. The Retail Florist Business by P. Fahl, The Interstate Publishing Company.

7. Forestry

a. Forests and Forestry by Anderson and Smith, The Interstate Publishing Company.

b. An Introduction to Forestry by Hilterbrand, Bolt Publishers.

Bulletins and Circulars

1. "Agriopportunities," American Cyanamid Company, Princeton, New Jersey.

2. "A Career as a Conservation Agent," Missouri Conservation Commission, P.O. Box 180, Jefferson City, Missouri.

3. "Careers in Dairy and Food Technology," Department of Dairy and Food Industry, 101A Dairy Industry Building, Iowa State University, Ames, Iowa.

4. "Careers in Floriculture," Department of Horticulture, Michigan State University, East Lansing, Michigan.

5. "Careers in Landscape Architecture," College of Agriculture and Environmental Science, Rutgers State University, New Brunswick, New Jersey.

6. "Careers in Wholesale and Retail Floristry," Dr. John A. Wright, Professor of Horticulture, Box 4028, Tech Station, Ruston, Louisiana.

7. "Careers for Youth in the Poultry Industry," Western Poultry Congress, P.O. Box 307, Baldwin Park, California.

8. "Choose Agriculture for an Interesting Career," Professional Personnel Recruitment Committee in Agricultural Education, American Vocational Association, 1510 H Street, N.W., Washington, D.C.

9. "An Engineering Career for You in the Soil Conservation Service," No. 715, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.

10. "Engineering Careers in the World's Largest Industry," Agricultural Engineering Department, Oklahoma State University, Stillwater, Oklahoma.

11. "A Job with the Forest Service," No. 843, Forest Service, U.S. Department of Agriculture, Washington, D.C.

12. "North Carolina--A Land of Horticultural Opportunity Offers You a Challenging Career in Horticulture," The Department of Horticultural Science, North Carolina State College, Raleigh, North Carolina.

13. "Occupational Information in Agriculture," College of Education, Michigan State University, East Lansing, Michigan.

14. "A Science Career for You in Agriculture," Southern Regional Education Board, 130 Sixth Street, N.W., Atlanta, Georgia.

15. "So You Want to be a Forester?" Forest Service, U.S. Department of Agriculture, Washington, D.C.

16. "Students--Start Your Career in SCS Before You Graduate," No. 714, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.

Films

1. "Careers om Animal Industry," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

2. "Careers in Crops," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

3. "Careers in Farm Machinery and Service," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

4. "Careers in Farm Services," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

5. "Careers in Farm Supplies," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

6. "Careers in Government Services," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

7. "Careers in Natural Resources Management," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

8. "Careers in Ornamental Horticulture," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

9. "A Day on the Farm," 19 minutes. This film in full color shows the work of a farmer and his assistants during a typical working day which is especially full during haymaking. General Consumate of Cleveland, 1444 Illuminating Building, 55 Public Square, Cleveland, Ohio 44113.

10. "Dynamic Careers Through Agriculture," This film shows the opportunities in agribusiness for young people. Farm Film Foundation, 1425 H. Street Northwest, Washington, D.C. 20005.

11. "The Food Processing Industry," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

12. "You and the Waitress," Vocational Education Production, California State Polytechnic College, San Luis Obispo, California, $7.50 with an additional $.50 for narration and script.

*Addresses of publishers and distributors can be found in the Appendix.

GENERAL EXPLORATION FORM

1. Name of the occupation _____

2. Name of the person or business visited _____

3. Job title _____

4. Job family _____

5. What was the primary function of the job? _____

_____

6. What were the major activities being conducted?

   a. _____

   b. _____

   c. _____

7. What competencies were required for success on the job?

_____

_____

8. What was your general opinion of the job observed in terms of

   a. Working conditions? _____

   b. Items or materials working with? _____

   c. Difficulty of tasks performed? _____

9. Would you enjoy this job? _____yes _____no Why?

_____

_____

AUDIO-VISUAL REPORT

1. Type of presentation: _____

2. Title: _____

3. Theme of presentation: _____

_____

4. Information I received from this presentation: _____

_____

_____

_____

_____

_____

_____

5. How can I apply this to my life? _____

_____

_____

_____

_____

_____

_____

6. How was this presentation helpful to me? (Explain) _____

_____

_____

_____

_____

_____

_____

IN-DEPTH CAREER EXPLORATION

1. What is the specific job title? _____

2. What is the employment outlook concerning the occupation?

   a. Present _____

   _____

   b. Future _____

   _____

3. What duties does the worker perform? _____

   _____

4. Do these duties vary? How? _____

   _____

5. What equipment is used on the job? _____

   _____

6. What materials are handled? _____

   _____

7. Is the work indoors or outdoors? _____

   _____

8. How many hours are usually worked each week? _____

   _____

9. What are the surrounding conditions related to the occupation? _____

   _____

10. How much education is required? High school? _____

    Technical school? _____ College? _____

    Other _____

11. What is the usual beginning salary? _____

12. What increases are expected in salary? What are the conditions?

_____

13. What are the fringe benefits in terms of sick leave, insurance, etc.?

_____

_____

14. What qualifications, other than educational, are necessary?

a. Physical _____

b. Mental _____

c. Aptitude _____

d. Personality _____

15. What are some jobs related to this occupation? _____

_____

16. What interests of yours would this job satisfy? _____

_____

17. What abilities of yours is this job related to? _____

_____

18. What would be the advantages of this job being your occupational choice? _____

_____

_____

19. What would be the disadvantages of this job being your occupational choice? _____

_____

_____

20. Would you like to explore this occupation in even greater depth?

_____

## HOW MUCH DID JOHNNIE MAKE?

Johnnie raised one acre of tobacco this year. He is now trying to figure his net income after-deducting all of his expenses.

He sold 3,000 pounds of tobacco which averaged $.85 per pound. On the day Johnnie sold, he was the top man of the complete sale. He even got his name read on television.

However, Johnnie had quite a few expenses. They included the following:

1. One ton of 5-10-15 fertilizer @ $60 per ton
2. 200 pounds of ammonium nitrate @ $65 per ton
3. Materials for plant bed preparation--$25.00
4. Crop insurance @ $70 per acre
5. Operating machinery 25 hours @ $2.00 per hour
6. Marketing costs--$150
7. Taxes--$50
8. Labor--200 hours @ $2.00 per hour

Since Johnnie was raising the tobacco on a neighbor's farm, he only received half of the income.

What was Johnnie's net income from one acre of tobacco?

## HOW MUCH DID SALLY MAKE?

Sally has a beautiful mare from which she raised a foal this year. She is now trying to figure her net income after deducting all of her expenses.

Sally sold the foal for $200 to her neighbor for his little boy.

However, Sally had quite a few expenses. They included the following:

1. One ton of hay @ $40 per ton
2. Thirty bushels of oats @ $1.30 per bushel
3. Veterinarian and drugs--$12.00
4. Breeding fee--$25.00
5. Pasture five tons @ $6 per ton
6. Insurance and taxes--$4.00

What was Sally's net income?

## HOW MUCH DID JIM AND JANE MAKE?

Jim and Jane decided to work in a brother-sister project of raising one acre of strawberries. They are now trying to figure their net income after deducting all expenses.

Jim and Jane sold a total of 6,000 quarts of strawberries at $.40 per quart from their one acre.

However, they also had the following expenses:

1. Fertilizer--800 pounds @ $128 per ton
2. Plants or seed--$20.00
3. Machinery and equipment--4 hours @ $8 per hour
4. Chemicals--$20.00
5. Containers and miscellaneous items--$500.00
6. Labor--550 hours @ $2.25 per hour

What was their gross income? How much did Jim and Jane net individually?

AGRIBUSINESS PRODUCT INFORMATION SHEET

Name of the product: _____

Place purchased or studied: _____

Purpose of the product:
(What it is used for) _____

_____

How does the product function? _____

_____

How do you use the product? _____

_____

_____

What is the product made of? _____

_____

Who made the product? _____

_____

Where was the product manufactured? _____

Maintenance of the product:
(If the product is not consumable) _____

_____

Packaging--sizes and materials: _____

_____

Price of product in different sizes: _____

_____

## CUSTOMER COMMENTS AND QUESTIONS

How would you respond to the following comments or questions?

1. Customer remarks: "I am just looking."

2. A man says: "I want to see the best lawn spray you stock."

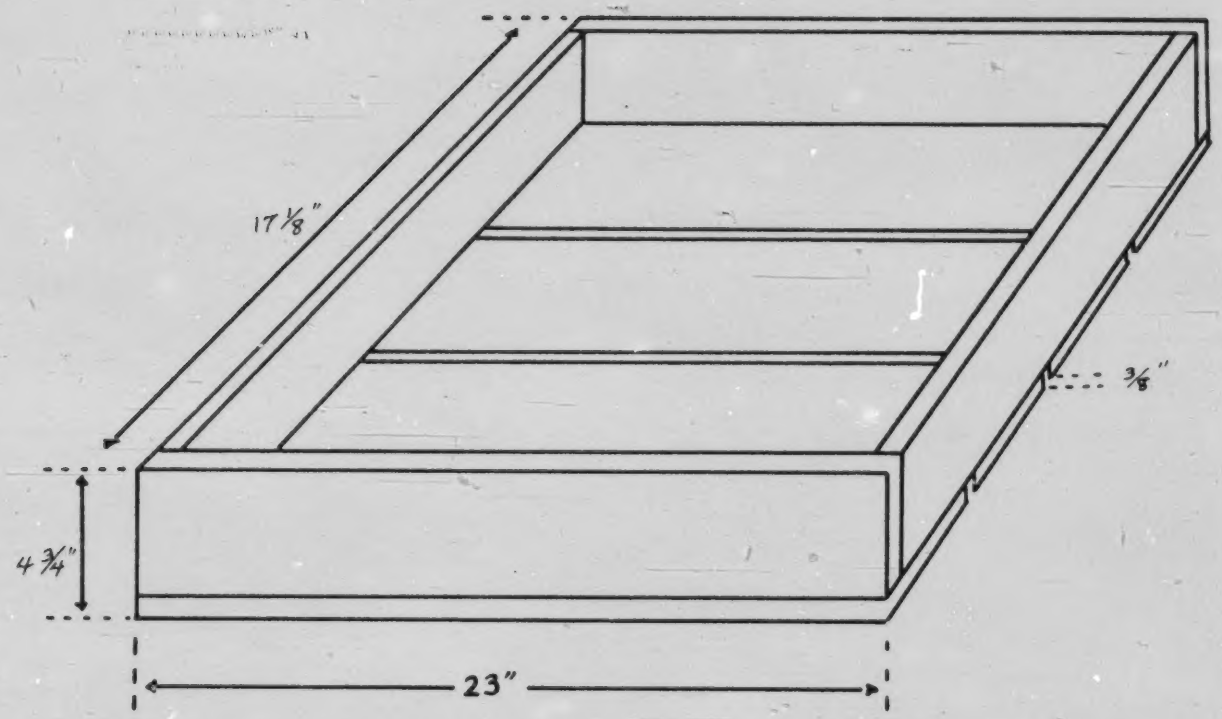
3. A lady asks: "What will you do if this weed killer doesn't kill the weeds in my lawn?"

4. A man asks: "The warranty on my chainsaw ran out three days ago and my saw quit yesterday. What are you going to do?"

5. A lady asks: "How do you start a charge account in this store?"

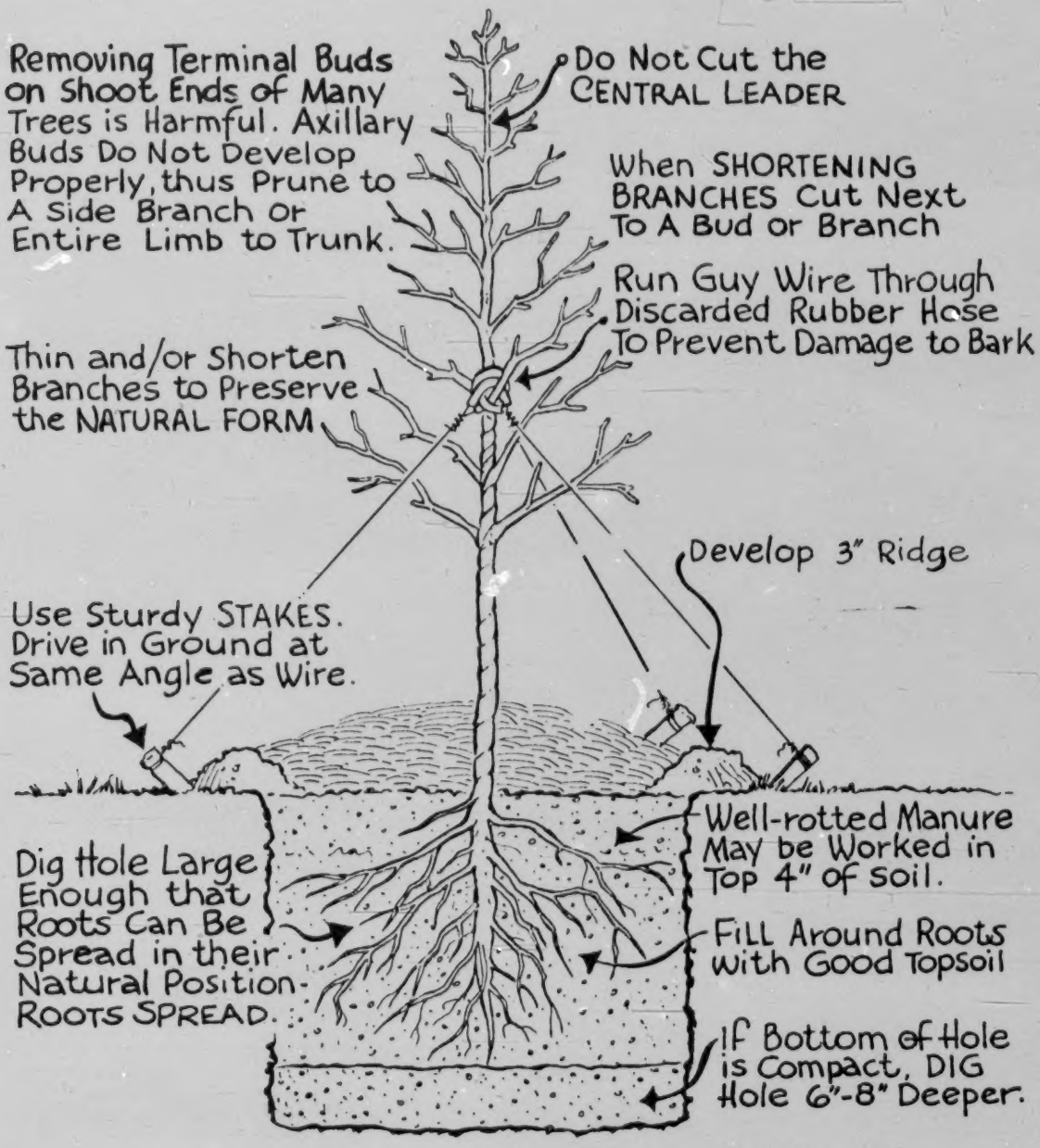
6. A man questions: "Why don't you keep all brands of tractor oil on stock?"

# HORTICULTURAL FLAT CONSTRUCTION




G. OWENS, CURR. DEV. CNTR., U.K., 967-10

# TREE PLANTING


Removing Terminal Buds on Shoot Ends of Many Trees is Harmful. Axillary Buds Do Not Develop Properly, thus Prune to A Side Branch or Entire Limb to Trunk.
Do Not Cut the CENTRAL LEADER
When SHORTENING BRANCHES Cut Next To A Bud or Branch
Run Guy Wire Through Discarded Rubber Hose To Prevent Damage to Bark
Thin and/or Shorten Branches to Preserve the NATURAL FORM
Develop 3" Ridge
Use Sturdy STAKES. Drive in Ground at Same Angle as Wire.
Well-rotted Manure May be Worked in Top 4" of soil.
Dig Hole Large Enough that Roots Can Be Spread in their Natural Position- ROOTS SPREAD.
FILL Around Roots with Good Topsoil
If Bottom of Hole is Compact, DIG Hole 6"-8" Deeper.

UNIT FOUR

EDUCATIONAL OPPORTUNITIES

IN

AGRIBUSINESS

UNIT PURPOSE: To identify opportunities for training in the agribusiness cluster area.

PERFORMANCE OBJECTIVES: The student will be able to

I. List sources of information concerning training in agribusiness.

II. List general educational requirements for a career in agribusiness.

III. List training areas available for receiving occupational training in the area of agribusiness.

IV. List the steps to follow in order to become trained in one occupation of interest in agribusiness.

I. The student will be able to list sources of information concerning training in agribusiness.

A. Suggested Content

1. Information sources

a. Individuals

(1) Parents
(2) Teachers
(3) Guidance personnel
(4) Other students
(5) People in agribusiness occupations
(6) Agricultural extension agent
(7) Vocational agriculture teacher
(8) College personnel

b. Brochures and catalogs

(1) School catalogs
(2) Brochures
(3) Other, etc.

2. Students must become aware of the different sources of informational aid concerning training in agribusiness.

B. Suggested Teaching-Learning Activities

1. Involve the student in writing a paper, "With Whom Would I Talk If I Wanted Information Concerning My Educational Future?"

2. Invite into the classroom a college student majoring in agribusiness. Let him discuss who he talked with or where he received the most information concerning training in agribusiness.

3. Invite into the classroom a person successfully employed in the area of agribusiness. Let him discuss his primary sources of information concerning training in agribusiness.

4. Involve the student in studying school catalogs and brochures from different educational agencies which should be available in the school library or the agricultural library.

5. Show transparency AGR-16, "Sources of Information," page 114. Involve the student in adding to the list.

C. Suggested Evaluation

Compile a list of information sources concerning agribusiness. The student will select the three primary sources and explain his choice. Evaluate the student based on his written or oral discussion of his three choices.

D. Suggested Resources

1. Resource persons

   a. Guidance personnel
   b. People employed in agribusiness
   c. Vocational agriculture teacher
   d. County extension agent

2. Printed material

   a. School catalogs
   b. School brochures

3. Transparency Master AGR-16, p. 114.

II. The student will be able to list general educational requirements for a career in agribusiness.

A. Suggested Content

1. Educational requirements for success in all areas of agribusiness include knowledge in the following areas:

   a. Plant science
   b. Soil science
   c. Animal science
   d. Agricultural mechanics
   e. Business management
   f. Record keeping
   g. Other

2. Basic skills through educational training must also be developed in the following areas:

   a. Salesmanship
   b. Basic math
   c. English

3. Other educational requirements will depend on the level at which the individual will become employed in agribusiness.

   a. Professional
   b. Technical
   c. Skilled
   d. Semi-skilled
   e. Unskilled

B. Suggested Teaching-Learning Activities

1. Student can review occupational analysis forms completed during the exploration phase of the guide to determine general educational requirements for different jobs.

2. Student can review occupational briefs in the literature or those furnished in the Appendix, pages 144-168 of the guide, to determine general educational requirements.

3. A panel of resource people can be formed from the different job family areas of agribusiness with the specific task of discussing educational requirements for success in agribusiness.

4. A panel of students can be formed. The panel will consist of a student who, during the exploration phase, studied a particular job family area of agribusiness. Each job family area will be represented by one student. Dialogue can be stimulated through questions concerning the educational requirements for success in agribusiness.

5. The guidance counselor, vocational agriculture teacher, or local county agent can visit the class and discuss the educational requirements for success in agribusiness.

6. Involve the student in completing the exercise in basic agricultural math and basic grammar. Stress the importance of mathematical and English skills to success in agribusiness. The exercises can be found on pages 116-118.

C. Suggested Evaluation

Compile a list of educational requirements for both agribusiness and other occupational areas. The student will select those educational requirements required for success in agribusiness. Evaluate the student based on the number of correct selections made.

D. Suggested Resources

1. Resource persons

   a. Guidance counselor
   b. Vocational agriculture teacher
   c. County extension agent

2. Books

   a. Handbook of Agricultural Occupations, pp. 43-47.

   b. Careers in Agribusiness and Industry, Chapter 4.

3. Appendix of the Guide

   a. Occupational Briefs, pp. 144-168.

III. The student will be able to list training areas available in agribusiness.

A. Suggested Content

1. Training areas available

a. Home
b. Business
c. High school

(1) Day classes
(2) Evening classes

d. Trade or vocational school
e. Technical school
f. Community or junior college
g. Four year colleges and universities
h. Other

2. The training area chosen will depend on the level at which the individual plans to enter the occupation.

a. Professional
b. Technical
c. Skilled
d. Semi-skilled
e. Unskilled

B. Suggested Teaching-Learning Activities

1. Guidance counselor can discuss with the student training areas available, location of area, and requirements for entry.

2. Student can visit high school vocational agribusiness classes under teacher supervision.

3. Form a panel of vocational agribusiness students who can discuss high school vocational agribusiness programs with the students.

4. Resource people from different areas of agribusiness can be involved in discussing the areas where they received their training.

5. Field trips under teacher supervision can be taken to vocational school or colleges and universities. A field trip report form such as the one found on page 119 should be completed.

6. Set up an educational display depicting materials from different educational agency sources from which the student can study.

7. A student who is presently employed in a cooperative work experience program can be visited on a field trip or brought into the class as a resource individual.

8. Show transparency AGR-17, "Training Areas Available," page 115. Involve the student in adding to the list.

C. Suggested Evaluation

1. The student will write a brief report, "Where I Would Go To Receive Training in Agribusiness." Evaluate the report based on the adequacy of development.

2. Compile a list of training areas available for agribusiness. The student will select three areas he feels most important and tell why. Evaluate the student based on his written or oral discussion of his three choices.

D. Suggested Resources

1. Resource persons

   a. Vocational agribusiness teacher
   b. County agent
   c. Soil conservation agent
   d. Vocational agribusiness students
   e. College and university public-relations individuals

2. Books

   a. Careers in Agribusiness and Industry, pp. 36-40, 44-45.

   b. Experience Programs for Learning Vocations in Agriculture, Ch. 2.

3. Brochures and Catalogs

   a. School catalogs

   b. School brochures and pamphlets

4. Transparency Master AGR-17, p. 115.

IV. The student will be able to list the steps to follow in order to become trained in one occupation of interest in agribusiness.

A. Suggested Content

1. Identify primary sources of information

   a. Parents
   b. Guidance personnel
   c. Teachers, etc.

2. Identify general educational requirements

   a. Plant science
   b. Soil science, etc.

3. Identify primary training areas available

   a. Home
   b. High school
   c. Vocational school, etc.

B. Suggested Teaching-Learning Activities

1. Involve the student in selecting one occupation of interest and determining the steps to follow in order to become trained in that occupation.

   a. Example: Beef Cattle Farmer

      (1) Sources of information

      --Local beef farmer
      --Teacher of vocational agriculture
      --County agent

      (2) Areas training needed

      --Animal science
      --Plant science
      --Mechanics
      --Record keeping

      (3) Places where training could be given

      --Home
      --High school agribusiness class
      --Cooperative farm placement
      --College or university

2. Teacher can select different successful resource people in agribusiness from the community and let these individuals discuss the steps they followed in order to reach the success level at which they have attained in terms of the three areas in the content outline.

3. Teacher can set up individual or group counseling sessions involving the student and parents, guidance counselors, or people employed in agribusiness.

4. Student can review material in the resource center secured during the exploration phase of the guide.

C. Suggested Evaluation

The student will prepare a written or oral report concerning the steps to follow in order to become trained in a specific occupation in agribusiness. Evaluate the student based on the number of steps he includes as presented in the content.

D. Suggested Resources

1. Resource persons

a a. Guidance counselor
b. People employed in agribusiness
c. Parents

2. Books

a. Careers in Agribusiness and Industry, Ch. 13.

b. Handbook of Agricultural Occupations, Chs. 6-14.

c. Experience Programs for Learning Vocational Agriculture, Chs. 24-30.

3. Appendix of the Guide

a. Occupational Briefs, pp. 144-168.

# SUPPORTIVE MATERIALS FOR UNIT FOUR

## REFERENCE LIST FOR UNIT FOUR

Books


1. Careers in Agribusiness and Industry by Stone, The Interstate Publishing Company.

2. Experience Programs for Learning Vocations in Agriculture by Binkley and Hammonds, The Interstate Publishing Company.

3. Handbook of Agricultural Occupations by Hoover, The Interstate Publishing Company.


*Addresses of publishers and distributors can be found in the Appendix.

# SOURCES OF INFORMATION

1. Individuals

   --Parents
   --Teachers
   --Guidance personnel
   --Other students
   --People in agribusiness occupations

2. Written Material

   --School catalogs
   --School brochures

# TRAINING AREAS AVAILABLE

1. Home
2. Businesses
3. High school
4. Trade or vocational school
5. Technical school
6. Community or junior college
7. Four-year colleges and universities

BASIC AGRICULTURAL MATHEMATICS

(Can you make the correct calculations?)

Instructions: Complete your calculations in the space provided below each problem and place your answer in the blank space provided.

1. John is going to grow three acres of tobacco. For that tobacco he must buy fertilizer and tobacco seed. Fertilizer sells for $115.50 per ton and seed sells for $62.00 per ounce. One acre of tobacco requires one ton of fertilizer and 1/16 ounce of tobacco seed. What will be the total cost to John for his three acres of tobacco?

   Answer _____

2. What will be the cost to a farmer if he is going to sow 50 acres of Korean lespedeza at 12 pounds per acre. Lespedeza seed sells at $24.50 per bushel. Forty-five pounds of seed equals one bushel.

   Answer _____

3. Bill is going to buy a dairy cow. The cow will cost $500. Bill only has $100 in cash so he must borrow the additional amount from the bank. How much interest will Bill have to pay the first year if the interest rate is 8%.

   Answer _____

4. If concrete costs $18.00 per yard, what will it cost to pave a machinery court 50 feet wide x 70 feet long x 6 inches thick?

   Answer _____

5. What will the total cost be for the following farm items allowing for a 5% discount for cash sales and charging a 5% sales tax.

   2 ton ammonium nitrate @ $145 per ton
   20 pounds of alfalfa seed @ $1.00 per pound
   3 tractor filters @ $24 per dozen

   Answer _____

BASIC GRAMMAR

(Is this grammar correct?)

Instructions: Place your corrections in the space provided below the item. If a particular item is correct simple write the word correct in the blank space provided.

1. There was ten boys and eight girls at the tractor driving contest.

2. Sally's Dad who is a dairy farmer has went to town to deposited his latest milkcheck which was $600.

3. Mr. Jones owns a florist shop on Third Street. He pays Tommy $40 last week for helping him prune mums.

4. Mr. Ray, the high school vocational agricultural teacher spoke to our class concerning the jobs available in the field of agribusiness.

5. The local forest ranger has went to the fire prevention school held at the local fire station.

FIELD TRIP REPORT (Date) _____

1. Place of visit: _____

2. Time: _____ Date: _____

3. Purpose of trip: _____

_____

4. Areas and specialties we plan to see: _____

_____

_____

_____

_____

5. People we met: _____

_____

_____

_____

6. Brief summary of trip: _____

_____

_____

_____

_____

_____

_____

_____

7. What did you enjoy most about the trip: _____

_____

_____

_____

# UNIT FIVE

## EVALUATION OF SELF

## IN RELATION TO A CAREER

## IN THE CLUSTER AREA OF AGRIBUSINESS

UNIT PURPOSE: To analyze self in relation to a career in agribusiness.

PERFORMANCE OBJECTIVES: The student will be able to

I. Identify general characteristics and competencies needed for success in an agribusiness occupation.

II. List the factors to consider in deciding on a career in agribusiness.

III. Identify counseling sources for giving aid in making a career choice.

IV. Inventory self in relation to a career in agribusiness.

I. The student will be able to identify general characteristics and competencies needed for success in an agribusiness occupation.

A. Suggested Content

1. Knowledge of basic intellectual tools is required for success.

a. Reading

b. Communication, written and oral

c. Arithmetic

d. American free enterprise system

2. Desirable social-personal qualities are required for success.

a. Pleasing personal appearance

(1) Grooming
(2) Poise
(3) Voice
(4) Posture

b. Enthusiasm

c. Honesty and dependability

d. Initiative and ambition

e. Friendliness

f. Cooperation and courtesy

g. Punctuality

h. Self confidence and control

i. Businesslike manner

3. Certain physical characteristics relate to success in agribusiness.

a. Physical strength

b. Eyesight

c. Height and weight

d. Hearing

e. Speech

B. Suggested Teaching-Learning Activities

1. Involve the student in discussing the subject, "The Most Interesting Person I Know."

2. Involve the student in making a list of "The Traits I Possess Which Will Aid Job Success." Put a cumulative list on the board and discuss.

3. Teacher involve the student in writing a brief report on the subject, "Why I Like or Dislike People."

4. Involve the student in discussing the importance of physical characteristics to job success.

5. Divide the class into pairs. Have each individual analyze the other individual in terms of his desirable and undesirable traits. Involve the student in making a list of the characteristics of his partner.

   a. Traits to consider and discuss

      (1) Physical strength
      (2) Eyesight
      (3) Height and weight
      (4) Hearing
      (5) Speech
      (6) Other

C. Suggested Evaluation

The student will list and discuss three general characteristics which he feels he possesses which will aid his success in agribusiness. Evaluate the student based on the thoughtfulness of his discussion.

D. Suggested Resources

1. Resource persons

   a. Guidance counselor

2. Books

   a. Experience Programs, pp. 57-63.

   b. Handbook of Agricultural Occupations, pp. 39-41.

II. The student will be able to list the factors to consider in deciding on a career in agribusiness.

Note: This objective is to involve the student in reviewing the information secured during the exploration phase concerning the different jobs in agribusiness.

A. Suggested Content

1. Factors to study

a. Employment outlook

(1) Present
(2) Future

b. Nature of the work

(1) Duties performed
(2) Advantages of the job
(3) Disadvantages of the job
(4) Working conditions

--Salary
--Hours
--Fringe benefits

c. Personal qualities required

(1) Interests
(2) Physical abilities
(3) Mental abilities

d. Qualifications for employment

(1) Formal education
(2) On-the-job training
(3) Previous work experience

B. Suggested Teaching-Learning Activities

1. Teacher should involve the student in reviewing the information secured concerning the different job families and job titles during the exploration phase of the guide.

2. Involve the student in reviewing occupational briefs found in the Appendix of the guide, pages 144-168.

3. Students may gather additional information concerning a particular job title or job family from selected sources of interest.

4. Student interest in a particular job family or job title may facilitate the need for an additional resource person or field trip to secure additional information.

5. Teacher should hold each student responsible for studying at least two job titles in relation to the factors to consider in choosing a career in this area. In-depth exploration forms should be completed.

6. Involve the student in giving oral reports concerning the job occupations or job family which they have studied in depth.

C. Suggested Evaluation

The student will write a brief summary of the occupation or job family he is most interested in. Evaluate the student based on the number of areas covered in the summary as outlined in the content.

D. Suggested Resources

1. The resources for this objective can be taken from those listed for Objective 2 in Unit 3, pp. 69-70.

2. The resources used will depend on student needs and interests.

III. The student will be able to identify counseling sources available for giving aid in making a career choice.

A. Suggested Content

1. Sources of counseling

a. Parents

(1) Parents are very interested in the career that their child will choose, and parent opinion should be carefully considered by each student.

b. Guidance counselors

(1) Guidance counselors have special training in counseling students about occupations.

(2) Guidance counselors have many sources of occupational information.

c. Teachers

(1) Teachers of special subjects are a good source of information.

d. Religious counselors

(1) Most religious counselors have special training and are sources of occupational information and guidance.

e. Division of Economic Security

(1) This division of the state is concerned with employment and unemployment programs.

(2) This division is a source of testing, counseling, job placement, and labor market information.

f. Persons employed in the occupation

B. Suggested Teaching-Learning Activities

1. Involve the student in a round-table discussion on the subject, "The First Person I Talk to When I Have a Problem."

2. Show transparency AGR-18, "Counseling Sources," page 136, and conduct a discussion concerning different sources of information concerning occupations.

3. Conduct a teacher-led and student-involved discussion on the definition of guidance and also the sources of guidance.

4. Have the principal, or other individuals, discuss with the class the people who helped them make a career choice.

C. Suggested Evaluation

The student will list the three primary sources of guidance he would use and explain why. Evaluate the student based on the oral or written discussion of his guidance choices.

D. Suggested Resources

1. Resource persons

   a. Principal
   b. Teachers in school

2. Books

   a. Guidance in Agricultural Education, Ch. 1.

   b. Planning Your Future, Ch. 3.

3. Transparency Master AGR-18, p. 136.

IV. The student will be able to inventory self in relation to a career in agribusiness.

A. Suggested Content

1. Each student must first realize that he or she is a unique and different individual. Even identical twins are different in many respects.

2. Personal qualities to consider

a. Interests

(1) People do best what they enjoy most.

(2) Satisfaction results from the selection of an occupation closely associated with one's interests.

b. Academic abilities

(1) Ability refers to capacity to perform.

(2) Types

--Demonstrated
--Testing properly administered

c. Physical ability

(1) Different careers make different demands on health and physical ability.

(2) The choice of a career which enables the use of one's personal qualities leads to success.

B. Suggested Teaching-Learning Activities

1. Involve the student in discussing, "If I Could Have Any Job I Wanted, Which Would I Choose?"

2. Involve the student in choosing the particular job family he is most interested in at this point and tell why.

3. Teacher involve the student in listing three jobs in agribusiness that he is most interested in at this time and have him tell why. Teacher will want the student to collect all pertinent information available concerning the job.

4. Have each student write an autobiography. These autobiographies may be read in class. A sample outline for an autobiography may be found on page 137.

5. Involve the student in completing the self-picture checklist. A sample can be found on page 138.

6. Teacher have student (under the direction of guidance counselor) take the Kuder Interest Inventory or the Strong Vocational Interest Inventory. The guidance counselor must be involved in determining the results.

7. Involve the student in completing the form, "Who Am I." A sample form can be found on pages 139-140.

8. Involve the student in completing the form, "Grade Analysis." A sample form can be found on page 141.

9. Set up group counseling sessions for the student involving guidance counselors or other counselors.

   Note: These sessions will be to interpret information compiled on a general basis.

10. Plan individual counseling sessions for the student to discuss specific abilities in relation to specific job families or jobs.

11. Motivate the student to discuss with their parents discovered abilities and interests in relation to a career in agribusiness.

12. Involve the student, counselors, and parents in comparing discovered abilities and interests with the job family or specific jobs the student has shown the greatest amount of interest in. Student analysis and occupational analysis forms would be of great value here.

13. Involve the student in completing the form, "My Plan from Here." A sample form can be found on page 142.

C. Suggested Evaluation

The student will take one occupation or one job family and identify reasons why he will or will not study the occupation or job family in greater depth. The reasons identified will be in relation to his particular characteristics and abilities. Evaluate the student based on the number of reasons given and the discussion of those reasons.

D. Suggested Resources

1. Resource persons

   a. Guidance counselors
   b. Par[illegible]
   c. Religious counselors
   d. Counselors employed by Office of Economic Security

2. Books

   a. I Find My Vocation, Ch. 9.

   b. Career Information in Counseling and Teaching, pp. 13-15.

   c. How To Get A Better Job, Ch. 3.

# SUPPORTIVE MATERIALS FOR UNIT FIVE

## REFERENCE LIST FOR UNIT FIVE

Books


1. Career Information in Counseling and Teaching by Isaacson, Allyn and Bacon, Inc.

2. Experience Programs by Binkley and Hammonds, The Interstate Publishing Company.

3. Guidance in Agricultural Education by Byram, The Interstate Publishing Company.

4. Handbook of Agricultural Occupations by Hoover, The Interstate Publishing Company.

5. How to Get a Better Job by Marshall, Appleton-Century.

6. I Find My Vocation by Kitson, McGraw-Hill.

7. Planning Your Future by Myers, Little and Robinson, McGraw-Hill.


*Addresses of publishers and distributors can be found in the Appendix.

# COUNSELING SOURCES

1. Parents
2. Guidance Counselors
3. Teachers
4. Religious Counselors
5. Counselors Employed at the Division of Economic Security
6. Persons Employed in the Occupation

SAMPLE - AUTOBIOGRAPHY OUTLINE

I. Early years

A. Place of birth

B. Date of birth

C. Early life experiences and remembrances

II. Family

A. Number in family

B. Number of brothers and sisters

C. Favorite family hobby

III. Experiences in school

A. First five years in school

B. From fifth grade till now

IV. Friends

A. Who are they

B. Things enjoyed together

V. Things liked or disliked

VI. Future Goals

A. Career

B. Educational

C. Other

SELF-PICTURE CHECKLIST

Place an X in the column which best describes the student.

| | Always | Usually | Sometimes | Never |
|---|---|---|---|---|
| 1. Honest | | | | |
| 2. Happy | | | | |
| 3. Friendly | | | | |
| 4. Sad | | | | |
| 5. Serious | | | | |
| 6. Sensitive | | | | |
| 7. Jealous | | | | |
| 8. Popular | | | | |
| 9. Shy | | | | |
| 10. Clumsy | | | | |
| 11. Show-off | | | | |
| 12. Afraid | | | | |
| 13. Kind | | | | |
| 14. Modest | | | | |
| 15. Proud | | | | |
| 16. Lazy | | | | |
| 17. Neat | | | | |
| 18. Thrifty | | | | |
| 19. Even-tempered | | | | |
| 20. Dependable | | | | |
| 21. Angry | | | | |
| 22. Moody | | | | |
| 23. Open-minded | | | | |
| 24. Unreasonable | | | | |
| 25. Demanding | | | | |

WHO AM I?

1. What occupation in agribusiness would you engage in if given a choice? Why? _____

_____

2. How did you become interested in this occupational area in agribusiness? _____

_____

3. What are your plans for the future as they relate to this occupation?

_____

4. What are your favorite hobbies? _____

_____

5. What subjects do you like in school? _____

_____

6. What subjects do you dislike? _____

_____

7. Do you enjoy working indoors or outdoors? _____

8. What clubs do you enjoy being a member of? _____

_____

9. What special abilities do you possess? _____

_____

10. What sports activities do you excel in? _____

_____

11. In what areas do your friends ask advice? _____

_____

12. Do you prefer to be a leader or a follower? _____

_____

13. How well do you get along with other people, friends, teachers, parents, etc.? _____

_____

14. What are the reasons you do not get along with some of the people mentioned above? _____

_____

15. What satisfaction would you like to get from your work? _____

_____

16. What vital information about yourself would interest an employer? Why?

_____

_____

17. What jobs have you engaged in which you really enjoyed? _____

_____

18. Why did you enjoy these jobs? _____

_____

19. What jobs have you engaged in which you really disliked? _____

_____

20. Do you think you would prefer to work with people, data, or things?

_____

21. What physical limitations do you possess? _____

_____

22. Do you value one life-style over another? _____

_____

23. If you could have any job in agribusiness you wanted, which would you choose? Why? _____

_____

24. What are your future ambitions or goals? _____

_____

GRADE ANALYSIS

Note: The purpose of this form is to involve the student in analyzing his grades in relation to a future career choice.

1. In what subjects do you have the highest interest? _____

_____

2. In what subjects do you have the lowest interest? _____

_____

3. In what subject areas do you receive the highest grades? _____

_____

4. In what subject areas do you receive the lowest grades? _____

_____

5. Did you get the highest grades in the subjects in which you worked the hardest? Explain. _____

_____

_____

6. How well do your grades represent your working ability? _____

_____

7. How well do your grades represent your ability to memorize? _____

_____

8. What is the relationship between your grades and your reading ability?

_____

_____

MY FUTURE PLANS

1. Have you made a tentative career choice in relation to agribusiness?

2. What is that choice?

3. What caused you to make that decision?

4. What are your plans now in relation to your career choice?

5. What knowledge and skills do you possess that will aid your success in your career choice?

6. What areas do you need additional knowledge, help, or skills in order to be a success in your career choice?

7. Where are some places you plan to visit or people you plan to talk with in order to gain additional knowledge or skills concerning your tentative career choice?

8. What is your next step in reaching your tentative career choice?

# APPENDIX

# AGRIBUSINESS OCCUPATIONAL BRIEFS

Note: In this section on occupational briefs, three jobs in each job family area will be analyzed in relation to employment trends, nature of the work, qualifications, entrance and advancement.

Additional occupational briefs can be obtained from the following references:

1. Dictionary of Occupational Titles
2. Handbook of Agricultural Occupations
3. Experience Programs for Learning Vocations in Agriculture

# PRODUCTION AGRIBUSINESS

FARMER

PART-TIME FARMER

EQUIPMENT OPERATOR

# FARMER

## EMPLOYMENT TRENDS:

Each year there are a number of people who begin farming as a profession, but the overall number is decreasing. The large capital investment required in farming will prevent many interested persons from entering this occupation.

## NATURE OF THE WORK:

Regardless of the type farming a person enters, the work performed will be similar. A farmer is responsible for the year-round operation of the farm. He performs the following jobs:

1. Makes decisions concerning the type crops grown on the farm and performs the various jobs of planting, cultivating, harvesting, and marketing of these crops.
2. Makes decisions pertaining to the kinds of livestock raised on the farm.
3. Assumes responsibility for the operation, maintenance, and/or repair of machinery, equipment, and buildings.
4. Keeps accurate records of supplies, purchases, sales and production figures.
5. Makes management decisions pertaining to operation of the farm.

The work is performed primarily outdoors, at times in all kinds of weather. The hours are often long during certain times of the year.

## QUALIFICATIONS:

A person desiring to be a farmer should have an above average interest in agriculture and should like to work outdoors with crops, livestock, and farm machinery. He should have good business sense and be able to make successful major and minor farm management decisions. A high school education is desirable and courses in agriculture, English, social studies, mathematics, and science would be beneficial. If you do not live on a farm, part-time work experience on a farm will provide you with an opportunity to acquire practical knowledge and skills needed in working with crops, livestock, and farm machinery. As a farmer, you will need good health, strength, and determination.

## ENTRANCE AND ADVANCEMENT:

For many individuals the way to enter farming may be to enter a partnership with their father or some other member of the family or they may take over the complete operation of the farm for a percentage of the profits. Many former FFA members have used supervised farming programs as a first step in becoming established in farming.

# PART-TIME FARMER

## EMPLOYMENT TRENDS:

The tendency for many persons to enter part-time farming in recent years has been increasing. Part-time farming has been increasing mainly because smaller farmers have been unable to make a good level of income farming, so they sought other work to support their income. Another reason for the increase is professional people and others who live in urban areas now desire to live in rural areas, so they buy small farms and spend some of their time working on the farm.

## NATURE OF THE WORK:

Part-time farmers perform essentially the same tasks as regular farmers only on a smaller scale. They are responsible for the operation of the farm and perform the following jobs:

1. Make management decisions relating to crops and livestock raised on the farm.
2. Maintain accurate records on the farm business.
3. Assume responsibility for the maintenance of equipment and buildings on the farm.

The number of hours spent working on the farm will be determined by the size of the farm.

## QUALIFICATIONS:

A prospective part-time farmer should have an interest in farming and should be willing to devote much spare time from his regular job to operating and managing the farm. A high school education is recommended with courses in English, mathematics, bookkeeping, biology, chemistry, and agriculture being helpful. Vocational agriculture will provide a person with good training needed for part-time farming. A farm background or part-time work experience on a farm while you are still in high school will be valuable training. Good health and physical stamina will be needed.

## ENTRANCE AND ADVANCEMENT:

Many interested individuals find several different ways to enter part-time farming. Many FFA members have started supervised farming programs in high school and have become established as part-time farmers by the time they completed their high school education. Others have worked at full-time jobs, saved their money, and later purchased small farms. Still others operate all or part of the family farm on a part-time basis in partnership with a member of the family or for a share of the farm income.

# FARM EQUIPMENT OPERATOR

## EMPLOYMENT TRENDS:

Qualified farm equipment operators are in demand at the present time because of the increased mechanization in farming. Agricultural engineers predict that in several years all goods consumers will be purchasing will have been machine harvested. Opportunities will be good for persons with mechanical aptitude and an interest in working with farm machinery.

## NATURE OF THE WORK:

There are several tasks that farm equipment operators will be performing. Some of the tasks they will have responsibility for include:

1. Driving and/or controlling various pieces of farm equipment while carrying out the jobs associated with producing crops.
2. Maintaining and repairing several types of farm equipment in the field as well as in the shop.

A farm equipment operator works an average of 40 hours a week with more hours required during peak seasons of the year.

## QUALIFICATIONS:

A prospective farm equipment operator should have an interest in working outdoors with farm equipment. A farm background or previous work experience in the operation of farm equipment is desired for this type of work. A high school education is preferred with courses in mathematics, English, science, driver education, agriculture, and machine shop. Courses in agriculture will provide a person with a basic knowledge of plant and animal science, general shop skills, and tractor and equipment maintenance and operation. Good health and physical strength will be an asset.

## ENTRANCE AND ADVANCEMENT:

There are many openings available on all types of commercial and institutional farms. You may apply directly to a farm manager or farm owner-operator for employment or ask the following for assistance:

1. State employment office (local branch)
2. County agents
3. Teacher of agriculture

Advancement in this occupation is usually based on willingness to learn and accept responsibility. Advancement may lead to a position as a farm manager, machinery partsman helper, or machinery mechanics helper.

# AGRICULTURAL SUPPLIES AND SERVICES

## AGRICULTURAL SUPPLIES MANAGER
## AGRICULTURAL SUPPLIES PRODUCT SALESMAN
## AGRICULTURAL CHEMICAL FIELDMAN

# AGRICULTURAL SUPPLIES MANAGER

## EMPLOYMENT TRENDS:

Agricultural supplies managers are in demand more each year. Farmers are buying feed, seed, fertilizer, and other supplies in greater quantities than ever before from agricultural supply businesses. Increased demands for food should cause supply businesses to grow in the future therefore increasing the employment opportunities.

## NATURE OF THE WORK:

A businessman with many duties or responsibilities would be an adequate description of an agricultural supplies manager. Some of the duties which he carries out include:

1. Supervising the work of others employed in the business.
2. Keeping an inventory of products on hand and a record of sales transactions.
3. Maintaining the operation and repair of processing equipment and other related equipment in the business.
4. Serving as a consultant to farmers concerning agricultural supplies.
5. Training new sales personnel and other employees.

## QUALIFICATIONS:

A high school education is required for this occupation with additional training in sales and business management desirable. A knowledge of general agriculture and agricultural supplies is essential as well as an interest in working with people. A prospective manager should be capable of assuming responsibility of managing a business and supervising the work of others. Certain physical handicaps will not hinder a person, but average health is necessary for this occupation.

## ENTRANCE AND ADVANCEMENT:

Feed mills, fertilizer plants, general agricultural supply businesses, seed companies, farm supply cooperatives, and other related businesses furnish jobs to the supplies manager. Prospective employees may apply directly at agricultural supply businesses, cooperative farm supply regional offices, and offices of the State Employment Service.

# AGRICULTURAL SUPPLIES PRODUCT SALESMAN

## EMPLOYMENT TRENDS:

As the number of agricultural supply businesses increase, so will the demand for product salesmen. Farmers and their city neighbors are buying more products from agricultural supply businesses for use on their farms, gardens, and lawns. The number of openings available to product salesmen will rise in the future due to increasing demand for agricultural supplies and other related products.

## NATURE OF THE WORK:

An agricultural supplies product salesman, as is the case with most other salesmen, is usually assigned to a sales territory. This may include one or more counties, a complete state, or several states. Much of the time will be spent traveling to agricultural supplies businesses. The salesman handles various items of farm products and equipment. He is responsible for displaying his equipment at fairs, supervising the use of the equipment, and other forms of advertisement. The work involves public relations, salesmanship, and a great deal of indoor work. The normal work week will average 44 hours.

## QUALIFICATIONS:

A prospective salesman should have an aptitude for salesmanship and a sincere interest in working with people. A high school education plus two or more years of college will be required for most jobs. A knowledge of farming and the supplies and equipment necessary for farming is a necessity. Enthusiasm, sales ability, and average health is a must. Certain physical handicaps will not hinder a person in this type of work.

## ENTRANCE AND ADVANCEMENT:

Many jobs are available in the manufacturing, wholesale, and retail phases of agricultural supply businesses. Entrance opportunities will be greater for the person who has had experience in an agricultural supplies business as a sales clerk.

# AGRICULTURAL CHEMICAL FIELDMAN

## EMPLOYMENT TRENDS:

With increasing populations, today's farmers are being pressed to become more productive. In order to meet these needs, farmers must rely on the use of chemicals to control insects, weeds, and plant diseases. Based on this reliance, the market for agricultural chemicals has steadily increased. This growth is expected to continue in the future and more agricultural chemical fieldmen will be needed.

## NATURE OF THE WORK:

A chemical fieldman may be assigned to a particular territory or working area. He calls on agricultural supply businesses about the promotion and sale of his chemicals. He is also responsible for educating county agents, vocational agriculture teachers, and other agricultural workers concerning problems on the use of agricultural chemicals. The work is done both indoors and outdoors and involves considerable travel. Working hours depend on the season of the year, but most fieldmen work approximately 44 hours a week.

## QUALIFICATIONS:

Chemical fieldmen must have an interest in working with people. A knowledge of general agriculture is essential and in some instances a person will need a specialized knowledge of plants, animals, and agricultural chemicals. A pleasing personality, an ability to work with people, a desire to learn, and the ability to use the skills of salesmanship are important.

## ENTRANCE AND ADVANCEMENT:

Jobs are found in most agricultural fertilizer and chemical firms. Entrance may be gained by working in an agricultural supply business as a clerk or salesman and then attending a short course sponsored by the industry.

# AGRICULTURAL MECHANICS

## AGRICULTURAL EQUIPMENT SERVICEMAN
## AGRICULTURAL EQUIPMENT SALESMAN
## AGRICULTURAL MACHINERY PARTSMAN

# AGRICULTURAL EQUIPMENT SERVICEMAN

## EMPLOYMENT TRENDS:

The majority of farms today have become larger and more mechanized in order to be profitable. Since farm machinery and equipment are becoming more complex, there will be an increasing demand for reliable servicemen in the future. At the present time, dealers and distributors cannot find enough servicemen to meet their needs.

## NATURE OF THE WORK:

In reality, an agricultural equipment serviceman could be called an equipment mechanic. He is responsible for the assembly, adjustment, repair, and maintenance of farm equipment. He may also serve as a consultant to customers on machinery repair problems. The work may range from general repair to specialized repair and maintenance. The work is done both in and outdoors depending on the job, but most work will be done in a modern shop.

## QUALIFICATIONS:

A person desiring to be an equipment serviceman should have a high degree of mechanical aptitude and interest in working with motors and other equipment. A high school education is required in most instances. Vocational agriculture in many schools provides such basic skills as welding, assembly of machinery, use of power tools, paint sprayers, and the principles of machinery operation and maintenance. Good health and average physical strength are necessary.

## ENTRANCE AND ADVANCEMENT:

Jobs of this nature are found in most agricultural production areas. Some are located in rural areas and some also in cities. Prospective employees may apply directly to a farm equipment dealer, state employment service, and/or large farm operators who maintain their own farm machinery. Advancement usually leads to such positions as head mechanic, shop foreman, and/or manager in an agricultural machinery business.

# AGRICULTURAL EQUIPMENT SALESMAN

## EMPLOYMENT TRENDS:

More agricultural equipment is being bought by farmers today than ever before. This is due to farms becoming larger and more mechanized. As a result of this increase in mechanization, the demand for salesmen in agricultural machinery businesses has increased also. If this trend continues in the future, more and more salesmen will be needed.

## NATURE OF THE WORK:

An individual desiring to be a farm equipment salesman must have the ability to work directly with farmers. His duties as a salesman will involve demonstrating equipment, helping farmers with their machinery problems, making sales, and conducting follow-ups to sales. The work is done both in and outdoors and involves a good deal of travel with sometimes irregular working hours.

## QUALIFICATIONS:

A potential salesman should first of all have the ability to work with people and have an interest in business and clerical work. It is necessary to have a high school education with emphasis on agriculture because a knowledge of general agriculture and the operation of farm equipment is essential. Prior experience in working with farm equipment would be helpful. Good health and physical stamina are necessary because much of the time is spent travelling. Irregular working hours will be required during certain seasons of the year.

## ENTRANCE AND ADVANCEMENT:

Any tractor and implement business would offer jobs of this nature. Prospective employees should apply directly to implement businesses or offices of the State Employment Service for employment. Advancement in this field may lead to positions such as a farm machinery company representative, fieldman, demonstrator, or sales manager.

# AGRICULTURAL MACHINERY PARTSMAN

## EMPLOYMENT TRENDS:

A very important and vital part of most tractor and farm implement business is the parts department. Many items of equipment have hundreds of parts that need to be replaced after continued use. Parts departments have these parts available to provide service to farmers when needed. With increased mechanization, the demand is expected to be good for persons who know the agricultural machinery parts business.

## NATURE OF THE WORK:

The agricultural partsman works primarily indoors in an implement business. He is responsible for the entire operation of the parts department. He orders parts for machinery and when they arrive he stores them in a systematic way so they can be easily located when needed. He keeps an accurate inventory of all parts on hand. He is responsible for keeping parts for the implement service department and also to farmers who do their own repairs. Some partsmen may be required to operate grinding and valve seating machines. The normal work week will average 44 hours.

## QUALIFICATIONS:

A high school education is required for this job. A prospective partsman should have clerical ability and an interest in helping farmers. A thorough understanding of farm machinery and the parts involved would be most helpful for this type of work. The work requires long hours of standing and walking so good health is necessary. Minor physical handicaps would not hinder a person in this occupation.

## ENTRANCE AND ADVANCEMENT:

Most positions as a partsman are earned by advancement from a mechanics position or a clerk in a parts department. Jobs are found in most machinery businesses. Prospective employees should apply directly to businesses or to offices of the State Employment Service. A partsman is in an excellent position to advance to service manager, office manager, or any sales position relating to agricultural machinery and equipment.

# AGRICULTURAL PRODUCTS

## FRUIT AND VEGETABLE MARKET MANAGER
## LIVESTOCK BUYER
## DAIRY PROCESSING EQUIPMENT OPERATOR

# FRUIT AND VEGETABLE MARKET MANAGER

## EMPLOYMENT TRENDS:

The majority of supermarkets in our economy are large businesses and are organized into individual departments. One of these departments is the fruit and vegetable department. The number of fruit and vegetable market managers has increased rapidly in the last ten years. The present demand is good for fruit and vegetable market managers and is expected to increase in the years ahead.

## NATURE OF THE WORK:

A fruit and vegetable department manager is responsible for the operation and management of the produce department. Some of his duties include:

1. Ordering produce and supplies
2. Displaying produce and keeping sales and inventory on a daily basis
3. Determining prices charged and notifying checkout counter of all price changes
4. Keeping floors and display cases clean
5. Supervising personnel working for him

The work is performed indoors with an average work week of 40 hours.

## QUALIFICATIONS:

A person interested in being a fruit and vegetable market manager must have a high school education with emphasis on business because he will be keeping records, accounts, and inventories. Work experience on a vegetable or fruit farm will be worthwhile as well as the ability to grade and judge quality fruits and vegetables. Good health is required since you may have to pass a physical examination required by the State Board of Health.

## ENTRANCE AND ADVANCEMENT:

Most individuals become produce managers by first working as a produce market helper. Experience of this type is required in order to become a manager. Jobs are found in chain stores, independent supermarkets, and wholesale produce markets. Advancement usually leads to positions such as fruit and vegetable buyer, assistant store manager, or store manager of a supermarket.

# LIVESTOCK BUYER

## EMPLOYMENT TRENDS:

Consumers are demanding larger quantities of livestock products each year. Not only are they demanding larger quantities, but they are becoming more discriminating in the quality of the products they purchase. Experienced buyers are needed to purchase this quality livestock. Employment opportunities are numerous for persons who have the ability to select quality live animals.

## NATURE OF THE WORK:

A prospective livestock buyer must have a thorough knowledge of livestock. The livestock buyer's time is spent primarily traveling to farms, terminal markets, or local auction barns. A buyer must be able to evaluate a pen of animals, assess them for their quality, bargain for them, and make arrangements for transporting them to a processing plant. A buyer may also perform promotional activities and public relations work on behalf of his firm.

## QUALIFICATIONS:

A high school education and a sincere interest in livestock are requirements for this job. Experience in working with livestock is a necessity and special training in grading and classifying live and dressed animals may be required. A B.S. degree in animal science will be required by some buying firms. Good health and strength are desirable because of the nature of the work.

## ENTRANCE AND ADVANCEMENT:

An individual desiring to enter this occupation needs experience in buying livestock and may start as a stockyard worker and work with an experienced buyer. Jobs are usually found in most meat packing and large slaughter houses. Advancement may lead to head livestock buyer for a livestock buying firm.

# DAIRY PROCESSING EQUIPMENT OPERATOR

## EMPLOYMENT TRENDS:

The dairy industry is one of our largest and most important industries. The milk and other products we consume today have been pasteurized and processed for health purposes. Due to this demand for clean, healthy products, the dairy processing industry has grown rapidly. The future employment trends for this occupation looks very promising.

## NATURE OF THE WORK:

A dairy processing equipment operator is responsible for the operation of all types of dairy processing equipment. Some of the jobs he may perform include:

1. Milk pasteurizing, ice cream, cheese, and butter making
2. Maintenance of clarifier, homogenizer, pasteurizer, and separators
3. Keeping of records pertaining to products processed and decision making for future products

The work is performed indoors with an average work week of 40 hours.

## QUALIFICATIONS:

A prospective dairy processing equipment operator must have a high school education. Post-high school training may be required in some cases. Prior on-the-job training is necessary before qualifying to be an equipment operator. A knowledge of the composition of milk, butterfat testing, and government regulations concerning milk products is required. Good health is necessary for health reasons.

## ENTRANCE AND ADVANCEMENT:

On-the-job training with supervision is necessary in order to enter the occupation of equipment operator. Jobs are found in most dairy processing plants. Advancement may lead to a quality control technician or a plant supervisor.

# HORTICULTURE

## FLORIST
## GREENHOUSE MANAGER
## GOLF COURSE SUPERINTENDENT

# FLORIST

## EMPLOYMENT TRENDS:

The floral industry has indicated that there are not enough qualified florists available to fill current job vacancies. In a day and age of leisure time, many people in urban areas are taking up gardening as a hobby. Skilled florists are needed in order to supply the demands for floral products for home gardeners as well as for special occasions.

## NATURE OF THE WORK:

A florist is responsible for many duties pertaining to the production and sale of flowers. Included among the florists duties are:

1. Providing and maintaining a supply of floral goods for sale
2. Designing floral arrangements and delivering these products to consumers
3. Supervising the work of employees

Florists may work an average of 44 hours per week, with longer hours required during certain times of the year.

## QUALIFICATIONS:

An aptitude for design work, an interest in flowers, some managerial ability, and a high school education are necessary requirements for the job of florist. Post-high school training in horticulture will be very beneficial and prior work experience in a floral shop is required before you can qualify for this job.

## ENTRANCE AND ADVANCEMENT:

The best method of entry into the floral business is through part-time employment as a florist's helper, deliveryman, or a greenhouse worker. Jobs may be found in almost any floral shop. Advancement usually leads to manager of the floral shop or owner of a floral business.

# GREENHOUSE MANAGER

## EMPLOYMENT TRENDS:

Due to the increased demand for flowers and potted plants and the difficulty of finding qualified greenhouse managers, employment needs in this area is presently great.

## NATURE OF THE WORK:

An individual desiring to be a greenhouse manager will perform a variety of duties relating to the production of flowers. He is responsible for:

1. Preparing soil, planting, and transplanting various plants
2. Applying nutrients to the plants and controlling weeds
3. Controlling the plant environment in the greenhouse
4. Supervising other workers
5. Keeping sales inventory and records

Working conditions are good, mostly indoors, with approximately 44 hours per week required of the manager.

## QUALIFICATIONS:

A high school education with emphasis on floriculture is required for this job. Post-high school education is also desirable. Prior experience with on-the-job training and supervision will help you qualify as a greenhouse manager. Good health is necessary because a great deal of physical labor will be required.

## ENTRANCE AND ADVANCEMENT:

On-the-job experience is the easiest and most common method of entry into this occupation. Job opportunities may be found in retail and wholesale florist businesses. Advancement will be based on ability and interest in your work and will lead to better supervisory and managerial positions.

# GOLF COURSE SUPERINTENDENT

## EMPLOYMENT TRENDS:

Golf is a recreational activity that has increased in recent years. At the present time, there is a shortage of qualified superintendents to supervise care and maintenance of existing courses. Future employment opportunities are expected to increase as the number of golf courses increase. Both public and private organizations are continuing to build additional golf courses each year, therefore increasing greatly the demand for course superintendents.

## NATURE OF THE WORK:

Many jobs fall under the responsibility of a golf course superintendent. Jobs he must be capable of performing or training others to perform include:

1. Mowing, watering, fertilizing, and other cultural practices to assure health and good appearance of turfgrass
2. Operating and maintaining equipment such as mowers, tractors, and other equipment
3. Keeping records, budgets, and inventories

Most of the work is performed in pleasant outdoor surroundings. The work time will average 40-45 hours a week.

## QUALIFICATIONS:

A prospective golf course superintendent should have a high school education and special courses in greenskeeping and horticulture as minimum requirements for this occupation. Some golf courses may require a superintendent to have a two-year degree in turf management. Prior work experience will be beneficial for this job. You should have an interest in working outdoors with grasses, trees, shrubs, and flowers.

## ENTRANCE AND ADVANCEMENT:

Entry into this occupation will be easier if you have had special training in turf management or horticulture. Unless you have had special training, you will need three to five years of on-the-job work experience in turfgrass maintenance in order to enter the occupation. Jobs may be found at private golf courses, country clubs, parks, and other recreational areas. Advancement may lead to other positions relating to turf management.

# FORESTRY

FORESTER
FORESTRY AID
LOGGER

# FORESTER

## EMPLOYMENT TRENDS:

The demand for raw and finished wood products has steadily increased in the last 50 years. Forestry schools are turning out a large number of trained foresters each year but a shortage still exists. Along with the demand for forest products has been the need for conservation of forests. Attention is being given to recreational aspects, watershed management and wildlife protection more today than in the past. Many jobs will become available due to this fact.

## NATURE OF THE WORK:

Along with the title of forester goes a long list of duties relating to forests and forest-related products. A forester is, in general, responsible for the overall management of forest resources. His work involves timber production, watershed management, fire control, and maintaining recreational aspects relating to wildlife. A forester works a good deal with people, sometimes more than resources. He must correspond and cooperate with others whose work may be related to his own. The majority of the work is performed outdoors.

## QUALIFICATIONS:

Unlike many jobs, this one requires a college education, with emphasis in forestry. Graduate training may be required in some of the specialized fields. Part-time work experience with a forester will be a valuable asset to you. An individual desiring to be a forester should have good health and a sincere interest in outdoor work.

## ENTRANCE AND ADVANCEMENT:

The most common method of entry into this type of work is through the placement service of the school you attended. Many schools assist their graduates in finding employment. Jobs may be found in many of the forest related services or private industries. Promotion may lead to supervisory or management positions in the forest industry.

# FORESTRY AID

## EMPLOYMENT TRENDS:

The increase in demand for trained foresters has caused an increase in the need for forestry aids. They assist the forester in many of his duties pertaining to forest management. As the work load for foresters will increase in the future, so will the employment opportunities for the forestry aids.

## NATURE OF THE WORK:

A forestry aid carries out primarily the same type of work as the forester. His work may involve more physical labor than the forester, but he will have some management responsibilities. He will be directly involved in timber production, fire control, and park management. The work is primarily performed outdoors in sometimes adverse weather. The average work week will be 44 hours.

## QUALIFICATIONS:

A high school education is the only major requirement for this job. Since most of the work will be forest related, summer work experience or training at a forestry school will be most helpful. If you desire to work for the state or federal government, you may be required to pass a civil service exam. Good health and physical strength will be an asset to you.

## ENTRANCE AND ADVANCEMENT:

Entry to this type of job may be gained by simply applying directly to parks, forestry product processing industries or others who may be involved in forestry work. You may advance to supervisory positions or to a higher civil service classification with experience and determination.

# LOGGER

## EMPLOYMENT TRENDS:

Due to the mechanization of the logging industry, a logger has to be a highly skilled worker today. The timber industry is going to be good in the future and so will the demand for skilled loggers. Increased mechanization may decrease the total number of loggers but the demand for skilled loggers will increase.

## NATURE OF THE WORK:

A logger has the responsibility of getting logs from the forest to the processer or saw mill. His duties include selecting trees to cut, operating equipment to load the logs, maintaining and operating chain saws, tractors, trucks and other equipment involved in logging. Loggers work outdoors and their work may be affected severely by bad weather. The average work week will be 45-48 hours.

## QUALIFICATIONS:

A knowledge of forests and a sincere interest in working with equipment is required for this occupation. Part-time work experience will prepare you for this type of work. A high mechanical aptitude, good health, and physical strength is necessary. Physical handicaps will affect your work as a logger.

## ENTRANCE AND ADVANCEMENT:

You may find jobs as a logger with several different industries. Application can be made directly to the industry or through an equipment service. Advancement may lead to crew foreman, logging foreman, or other related jobs in the forest industry.

# AGRIBUSINESS OCCUPATIONAL TITLES

PRODUCTION AGRIBUSINESS

AGRICULTURAL SUPPLIES AND SERVICES

AGRICULTURAL MECHANICS

AGRICULTURAL PRODUCTS

HORTICULTURE

FORESTRY

OCCUPATIONAL TITLES
IN
PRODUCTION AGRIBUSINESS

1. Animal Breeder
2. Auctioneer
3. Beekeeper
4. Market Operator
5. Cattle Rancher
6. Cotton Grower
7. Dairy Tester
8. Farmer, Cash Grain
9. Farmer, Contract
10. Farmer, Dairy
11. Farm Equipment Operator
12. Farm Foreman
13. Farm Hand
14. Farmer, Tenant
15. Fruit Harvester Operator
16. Fur Farmer
17. Game Farmer
18. General Manager, Farm
19. Harvest Contractor
20. Hay Grower
21. Blacksmith
22. Manager, Farm
23. Milking Machine Operator
24. Poultry Breeder
25. Seed Grower
26. Sheep Herder
27. Sheep Rancher
28. Sheep Shearer
29. Tobacco Grower
30. Vegetable Grower

SELECTED OCCUPATIONAL TITLES
IN THE AREA OF
HORTICULTURE

1. Nursery Manager
2. Greenhouse Manager
3. Garden Center Manager
4. Florist
5. Park Superintendent
6. Tree Service Manager
7. Landscape Architect
8. Highway Landscape Architect
9. Golf Course Superintendent
10. Landscape Consultant
11. Landscape Aid
12. Floral Designer
13. Ornamental Horticulture Bookkeeper
14. Nursery Salesman
15. Garden Center Salesman
16. Nursery Grower
17. Greenhouse Grower
18. Nursery Shipping Clerk
19. Nursery Worker
20. Greenhouse Worker
21. Garden Center Worker
22. Garden Center Mechanic
23. Greenskeeper
24. Groundskeeper
25. Tree Surgeon
26. Tree Pruner
27. Tree Pruner Helper
28. Tree Sprayer

SELECTED OCCUPATIONAL TITLES
IN THE AREA OF
FORESTRY

1. Forestry Manager
2. Forest Warden
3. Forest Cruiser
4. Field Man
5. Forester Aid
6. Buyer
7. Foreman, Saw Mill
8. Log Grader
9. Log Scaler
10. Logging Operations Inspector
11. Timber Marker
12. Bough Cutter
13. Christmas Tree Cutter
14. Greens Picker
15. Logger
16. Saw Mill Equipment Operator
17. Timber Cutter
18. Seed Cone Picker
19. Sprayer
20. Tree Climber
21. Gum Gatherer

SELECTED OCCUPATIONAL TITLES
IN THE AREA OF
AGRICULTURAL SUPPLIES AND SERVICES

1. Agricultural Consultant, Bank
2. County Agricultural Agent
3. Farm Loan Officer
4. Supplies Manager
5. Supplies Production Manager
6. Supplies Sales Manager
7. Supplies Service Manager
8. Supplies Office Manager
9. Supplies Research and Development Director
10. Supplies Fieldman
11. Supplies Bookkeeper
12. Supplies Product Salesman
13. Supplies Service Mechanic
14. Supplies Applicator
15. Supplies Equipment Operator
16. Supplies Warehouseman
17. Vocational Agricultural Instructor

SELECTED OCCUPATIONAL TITLES
IN THE AREA OF
AGRICULTURAL MECHANICS

1. Machinery Manager
2. Machinery Service Manager
3. Machinery Parts Manager
4. Machinery Sales Manager
5. Machinery Office Manager
6. Agricultural Engineer
7. Machinery Fieldman
8. Machinery Bookkeeper
9. Machinery Salesman
10. Machinery Mechanic
11. Machinery Mechanic's Helper
12. Machinery Field Mechanic
13. Machinery Welder
14. Machinery Parts Man
15. Machinery Set-up Man
16. Machinery Warehouseman

SELECTED OCCUPATIONAL TITLES
IN THE AREA OF
AGRICULTURAL PRODUCTS

## Meat, Poultry, and Eggs

1. Meat Processing Plant Manager
2. Poultry Products Processing Plant Manager
3. Meat and Poultry Products Sales Manager
4. Meat and Poultry Products Department Manager
5. Veterinarian, Meat Quality
6. Meat Grader
7. Poultry Grader
8. Meat Processor
9. Poultry Processor
10. Meat Plant Worker
11. Meat and Poultry Products Salesman
12. Livestock Buyer
13. Poultry Buyer

## Fruit and Vegetables

1. Fruit and Vegetable Market Manager
2. Fruit and Vegetable Processing Plant Manager
3. Fruit and Vegetable Sales Manager
4. Fruit and Vegetable Product Manager
5. Fruit and Vegetable Field Man
6. Fruit and Vegetable Office Manager
7. Fruit and Vegetable Salesman
8. Fruit and Vegetable Processing Plant Foreman
9. Fruit and Vegetable Processing Worker
10. Fruit and Vegetable Market Worker
11. Fruit and Vegetable Buyer
12. Fruit and Vegetable Inspector or Grader

AGRICULTURAL PRODUCTS

(Continued)

## Dairy Products

1. Dairy Products Processing Plant Manager
2. Dairy Products Plant Production Manager
3. Dairy Products Sales Manager
4. Dairy Store Manager
5. Dairy Products Plant Fieldman
6. Dairy Products Laboratory Technician
7. Dairy Products Quality Control Technician
8. Dairy Products Plant Office Manager
9. Dairy Products Plant Bookkeeper
10. Dairy Products Plant Processing Supervisor
11. Dairy Products Plant Processor
12. Dairy Products Plant Worker
13. Dairy Products Salesman
14. Dairy Products Driver Salesman
15. Dairy Products Plant Mechanic
16. Dairy Products Plant Routeman

## Cereal Grains

1. Grain Elevator Manager
2. Grain Elevator Sales Manager
3. Grain Buyer
4. Seed Analyst
5. Grain Elevator Office Manager
6. Grain Salesman
7. Grain Elevator Processing Supervisor
8. Grain Elevator Man
9. Grain Elevator Mill Operator
10. Grain Elevator Processing Worker
11. Grain Dryer and Cleaner
12. Grain Elevator and Mill Maintenance Man

# CONTENT OUTLINE OF JOB FAMILIES

CONTENT OUTLINE OF JOB FAMILIES

Note: This content outline is designed to give teachers a greater knowledge base regarding the job families of agribusiness.

I. Job Family - Production Agribusiness

A. Major areas

1. Plant science

2. Animal science

3. Farm business management

B. Primary functions

1. Raise animals to supply meat, milk, and eggs

2. Raise plants to supply food, feed, and fiber

C. Primary businesses

1. Tobacco farmer

2. Beef farmer

3. Dairy farmer

4. Hog farmer

5. Horse farmer

6. Crop farmer

a. Soybeans
b. Corn

7. Truck farmer

D. Competencies required for success

1. Knowledge of breeding stock selection

2. Ability to balance rations

3. Knowledge of soil science

4. Knowledge of plant science

5. Knowledge of plant production practices

   a. Seeding rates
   b. Fertilization

6. Farm management skills

   a. Ability to figure returns per 100 pounds of feed fed
   b. Ability to handle hired help
   c. Ability to select land for raw-crop production

7. Ability to analyze economic trends

II. Job Family - Supplies and Services

A. Major areas

1. Chemicals
2. Building supplies
3. Seed
4. Feed
5. Fertilizer
6. Machinery and equipment
7. Professional services

B. Primary functions

1. Provide supplies for production of agricultural products
2. Provide services for production of agricultural products
3. Provide recommendations and information for product production

C. Primary businesses

1. Feed store
2. Chemical supplies center
3. Lumber center
4. Fertilizer business
5. Grain elevator

D. Competencies required for success

1. Ability to deal and communicate with the public
2. Understanding of how to conduct sales transactions

   a. Approaching buyer or customer
   b. Creating need for product
   c. Handling problems
   d. Selling related products
   e. Closing the sale

3. Knowledge of the products which you have for sale

4. Ability to keep records

5. Understanding of the limitations and functions of credit

6. Ability to organize a business

    a. Corporation
    b. Cooperative
    c. Partnership
    d. Sale proprietorship

III. Job Family - Agricultural Mechanics

A. Major areas

1. Agribusiness machines and equipment

2. Agribusiness materials handling

a. Structures handling
b. Constructional maintenance of structures

3. Mechanical skills

4. Electrification

B. Primary functions

1. Provision of mechanical equipment and parts

2. Provision of services concerning mechanical problems

3. Provision of mechanical recommendations

C. Primary businesses

1. Tractor and implement dealership

2. Equipment manufacturers

3. Mechanics shops

4. Contractors of farm buildings

D. Competencies required for success

1. Knowledge of electrification

a. Principles of electrical safety
b. Maintenance of small electrical motors

2. Mechanical skills

a. Knowledge of tool use and safety
b. Knowledge of arc and oxyacetylene welding
c. Ability to work with all types of metal

3. Knowledge of agricultural machines and equipment

a. Ability to service farm tractors and equipment
b. Knowledge of tractor and equipment safety
c. Ability to trouble-shoot and discover simple mechanical problems concerning tractors and farm equipment

4. Knowledge of how to handle agricultural materials

   a. Ability to paint
   b. Ability to figure bills of materials
   c. Ability to select, work, and measure materials

IV. Job Family - Agricultural Products

A. Major areas

1. Food products

a. Meat
b. Milk
c. Eggs, etc.

2. Non-food products

a. Tobacco
b. Wool
c. Cotton, etc.

B. Primary functions

1. Processing food and non-food products

2. Inspecting food and non-food products

3. Marketing food and non-food products

C. Primary businesses

1. Milk processing

2. Vegetable processing

3. Dairy processing

4. Meat processing

5. Cannery

6. Feed grain processing

7. Non-food processing

a. Tobacco
b. Wool
c. Cotton

D. Competencies required for success

1. Knowledge of current consumer demands for all types of products

a. Livestock products
b. Fruit and vegetable products
c. Cereal grains
d. Non-food products

2. Knowledge of processing from the producer to the consumer of all types of products

V. Job Family - Horticulture

A. Major areas

1. Floriculture
2. Greenhouse management
3. Landscape design and development
4. Nursery management and operation
5. Turfgrass management

B. Primary functions

1. Provide services to rural and urban individuals
2. Improve the environment through landscaping, etc.
3. Provide information and recommendations concerning fruits, vegetables, and ornamental plants
4. Produce food crops
5. Produce ornamental plants

C. Primary businesses

1. Greenhouse
2. Nursery
3. Landscaping company
4. Turf company
5. Vegetable production
6. Fruit production

D. Competencies required for success according to major areas

1. Turfgrass management

a. Ability to maintain, diagnose, and correct lawn or golf course problems
b. Ability to raise and market sod

2. Nursery operation and management

   a. Ability to produce, harvest, and sell ornamental shrubs
   b. Ability to grow, propagate, harvest, and sell woody plants
   c. Ability to work with and sell garden and lawn supplies

3. Floriculture and management of the greenhouse

   a. Ability to grow and sell flowers and foliage plants
   b. Ability to arrange floral designs
   c. Ability to grow and market vegetable crops

4. Landscape design and development

   a. Ability to plan and landscape a lawn
   b. Ability to plant and cultivate trees, shrubs, flowers, and other plants
   c. Ability to plan and landscape overall beautifying features

      (1) Walks
      (2) Paths
      (3) Pools, etc.

VI. Job Family - Forestry

A. Major areas

1. Forests or trees

2. Protection of forests

3. Wood utilization

4. Recreation in relation to forests and other natural resources

B. Primary functions

1. Production of trees for wood and fiber

2. Management of forests and their inhabitants for recreational purposes

3. Provide information and recommendations concerning wood and tree products

C. Primary businesses

1. State and federal forest agencies

2. Department of Natural Resources

3. Wood processing businesses

D. Competencies required for success

1. Knowledge of trees and their growth

2. Management skills in relation to trees and forests

3. Knowledge of logging, sowing, grading, measuring, and marketing lumber

4. Abilities to survey and level in relation to forest management

# ADDRESSES OF PUBLISHERS AND DISTRIBUTORS

Note: These addresses are furnished to allow teachers to contact the different publishing companies if the need arises. The addresses of all the publishing companies cited in the guide are included.

Allyn and Bacon
Boston
Massachusetts 02101

American Institute of Cooperation
1129-20th Street, N.W.
Washington, DC 20036

American Nurseryman and Florists' Publishing Company
343 South Dearborn Street
Chicago, Illinois 60604

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Box 39
Auburn, Alabama 36830

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West Chicago
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3315 South Street
Lafayette, Indiana 47904

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Washington, DC 20250

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8900 Manchester Road
St. Louis, Missouri 63144

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